PROTECTING YOUR VOTE
California has signed up a security expert to test whether its e-voting machines can withstand a hacker attack. **PAGE 6**

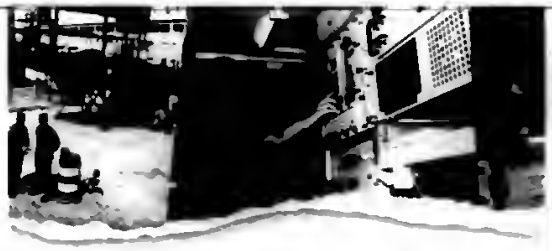
CHANGE IS IN THE AIR
David Moschella senses a shift that heralds new boom times for IT. **PAGE 27**



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IT Under The Gun

We can learn a lot from IT units that operate in emergency conditions such as hurricanes and war zones.

Class begins on **PAGE 43.**



NEWSPAPER

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Sun Aims for Developer Backing With Expanded Open-source Effort

Attracting IT support may take time, officials acknowledge

BY PATRICK THIBODEAU

Sun Microsystems Inc., whose software business has long lagged behind competitors', last week extended its list of open-source offerings to include all of its core software products.

Analysts said the move, which makes its middleware, management and Java development tools free to use, is yet another indication that such infrastructure software is becoming a commodity.

The new effort follows Sun's decision last year to offer its Solaris operating system as an open-source technology.

Sun officials acknowledged that the latest move won't cut software prices for most corporate users, who will still pay current prices for service and support. For instance, users of the company's Java Enterprise System middleware stack will pay $140 per employee annually for the entire product suite — the same as today's enterprise license price tag.

Nonetheless, some users do expect to benefit from the open-source principles.

Daniel Grim, executive director of network and systems at the University of Delaware in Newark, said that just after Sun's announcement, his developers discovered that they didn't need a software key to enable use of the new release of Suo's Studio 11 tool.

Typically, the school has to wait weeks or even months for new product keys. "So that is pretty useful," said Grim.

He also said Sun's earlier move to open the Solaris

Sun, page 61

INSIDE

Users Driven to Third-Party Security

Major database vendors don't yet meet user needs

BY ERIC LAI

Managing a 9TB SQL Server 2005 database full of confidential information such as patients' health claims and Social Security numbers, Adam Solesby knows he can't afford to skimp on security.



The director of strategic development at Franklin, Tenn.-based AIM Healthcare Services Inc. has savvy database administrators who encrypt all data that's archived or traveling through the network and who monitor database usage with auditing tools built in-house.

Still, Solesby said he has recently started to test third-party database security tools.

Why? "We have implemented policies and procedures like crazy here," Solesby said. "But databases are not hardened. They are still on the low end of the spectrum in terms of security."

Solesby isn't alone. Even though their licenses cost tens of thousands of dollars, big commercial databases aren't meeting user demand for increased data

Security, page 16

Ingres Loyalists Cautiously Hopeful For a Reversal of Database Decline

CA spin-off woos enterprises tired of license fees

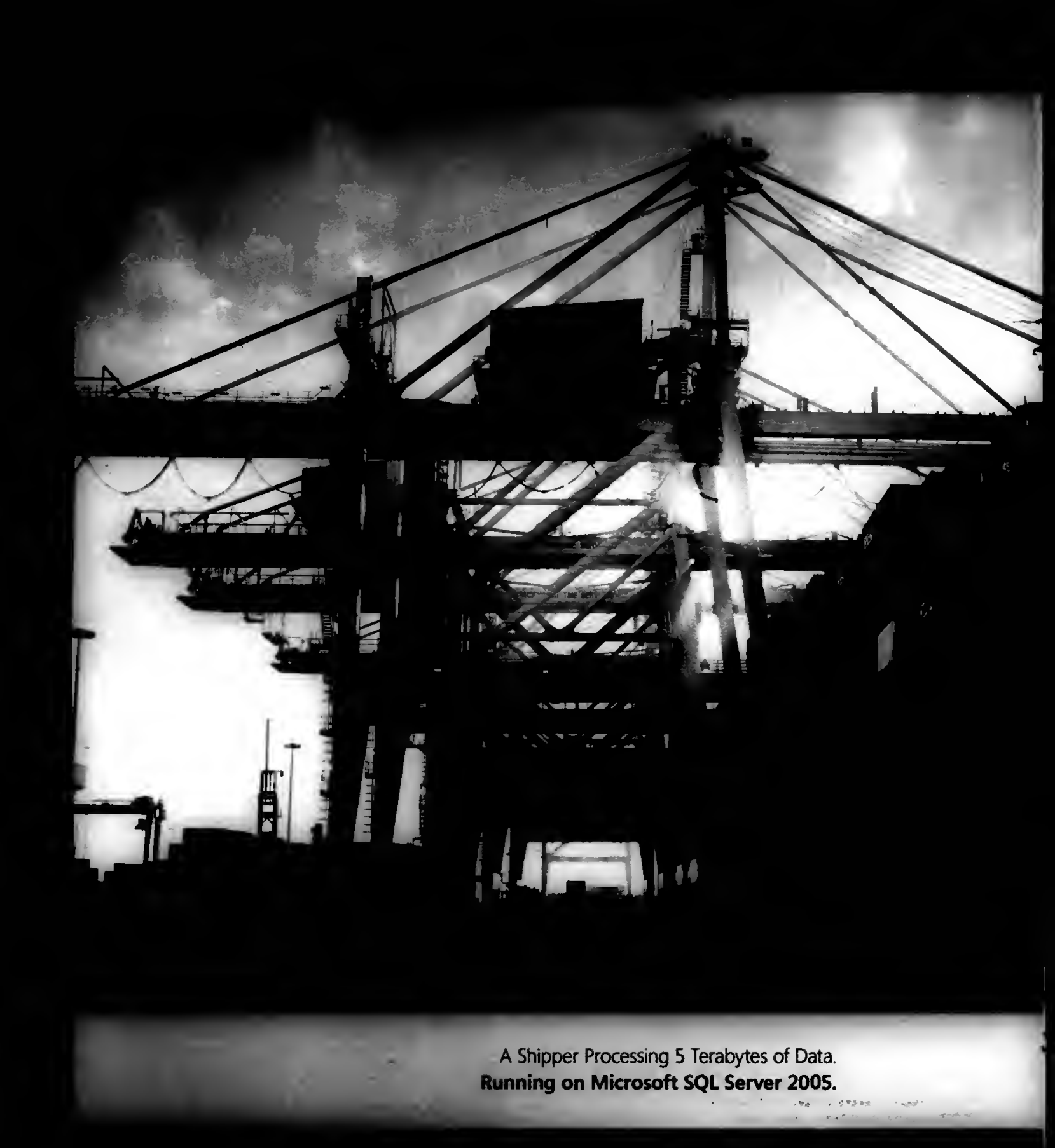
BY ERIC LAI

The new owners of the venerable Ingres database are pinning their comeback hopes on enterprise users who are fed up with the hefty commercial license fees and open-source developers who are largely unaware of the long-declining database.

Users of Ingres, which then-owner Computer Associates International Inc. turned open-source last year, say they are heartened by what they are hearing from Ingres Corp.

But analysts remain skeptical about Ingres' chances of success, and even the database's loyal-

Ingres, page 16



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In the Technology section: IT executives like Charlie Brenner of [illegible] say developing applications with open-source components can cause legal problems if you don't give programmers specific guidelines, methodologies and tools to help them stay within the law. **Page 29**



Working Through the Pain
In the Management section: Many IT groups that have sent work offshore have been disappointed in the results, but some have stuck with it, learned from their mistakes and forged valuable long-term relationships with offshore vendors. **Page 46**

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ONLINE

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The Power of One

MOBILE/WIRELESS: Brian Dal Bello and Pat Calhoun at Cisco Systems explain the benefits of having one identity and one mailbox for voice and data communications. **QuickLink a7510**

CIO Compensation and Shareholder Value

IT MANAGEMENT: Alinean's Thomas Pisello says companies have yet to align CIO pay with performance. **QuickLink 58123**

Picture-Perfect Package

MACINTOSH: In what may very well be the last of the G4 processor-based PowerBooks, Apple has created its best overall laptops yet. **QuickLink a7530**

Some Common Sense, Please

SECURITY: The case of Daniel Cuthbert, who was convicted of gaining illegal access to a charity Web site, is a prime example of why it's crucial for security professionals to have good judgment. **QuickLink a7520**

Mobile and Wireless Primer

WEBCAST: Learn about latest developments in tools, protocols and standards, and explore how new mobile technologies are being used in five vertical industries: health care, government, manufacturing, utilities and financial services. **QuickLink a5830**

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AT DEADLINE

Microsoft Issues Alert for IE Bug

Microsoft Corp. has issued a warning that hackers are targeting a critical unpatched bug in Internet Explorer. The attackers could use the flaw to seize control of a user's system, it said. The bug was first disclosed in May but was not considered to be serious until U.K.-based security firm Computer Terrorism Ltd. last week showed how hackers could exploit it and possibly take over a Windows system.

Cognos Warns of Poor Q3 Results

Cognos Inc. warned of grim financial results to its just-ended third quarter. CEO Rob Ashe said that sales forecasting and execution was poor and that the transition to the company's new Cognos 8 software "proved challenging." The Ottawa-based company now projects revenue of $209 million to $212 million. It had previously projected revenue of $233 million.

Intel to Build $3.5B Chip Plant in Israel

Intel Corp. is set to begin construction of a $3.5 billion advanced semiconductor manufacturing facility called Fab 28 in Kiryat Gat, Israel. The plant will be the seventh Intel facility that can produce 300mm silicon wafers, from which the company's microprocessors are cut. Intel currently has five 300mm chip plants in the U.S. and a sixth in Ireland. The new facility is expected to create 2,000 jobs over the next several years.

Novell Wins $39M U.K. Contract

The U.K. National Health Services agency has awarded Novell Inc. a $39 million contract to supply security, management and infrastructure technology. The three-year pact calls for the agency to use the Novell technology to eventually connect more than 100,000 doctors, 380,000 nurses and 50,000 other health care workers.

California Plans Hacking Test of E-voting Systems

Fla. test found Diebold machines vulnerable

BY MARC L. SONGINI

LOOKING TO quell fears about potential vote tampering with electronic voting machines, the state of California this month plans to hold a hacking test of an optical scan voting device from Diebold Election Systems.

The initial test was to be held last week but was postponed, said Jim March, an investigator at Black Box Voting Inc., a Renton, Wash.-based nonprofit voter advocacy group.

Plans for the California test come amid recurring concerns that e-voting gear, including optical scan and touch-screen voting machines, are vulnerable to intrusion or rigging.

March's organization prodded California Secretary of State Bruce McPherson's office to test Diebold's AccuVote



optical scan equipment for possible vulnerabilities after a check of the machines in Florida revealed problems.

March said the Leon County, Fla., test in May determined that a vulnerability in the memory card in the Diebold optical scan machine could allow a hacker to replace code and "doctor the results."

The California test is expected to be carried out by Finland-based security expert Harri Hursti, who conducted the Florida test in conjunction with Black Box. It hasn't been determined whether Black Box will be involved in the California trial run.

A spokeswoman for the California secretary of state said the Florida evaluation persuaded McPherson to sponsor a security test in his state. She said the secretary's office and Hursti are still working on the protocols and logistical details for the California test.

The spokeswoman said that a machine will be selected for the trial at random from an undetermined voting precinct in the state.

McKinney, Texas-based Diebold contends that its optical scan gear is not vulnerable to hacking and has agreed to work with McPherson on the upcoming test.

Diebold Responds

A Diebold spokesman called the Leon County, Fla., hacking test invalid. "We weren't ever aware of it," he said. Hursti and Black Box were given "complete and unfettered access" to the system and the passcode, but such access isn't generally available to outsiders, he said.

The spokesman also noted that security procedures during elections extend beyond the safety of the equipment.

"If I gave you the keys to my house and told you when I was out, you would have a good chance to get in," the spokesman said.

On another front, Diebold's status as a provider of e-voting equipment in North Carolina is in limbo after a judge last week denied its request for an injunction that would shield the company from the state's election transparency laws.

Diebold had argued that the laws requiring e-voting machine vendors to place all source code and related software in escrow can't be followed.

"We're not trying to evade anything," said Doug Hanna, a Raleigh-based attorney representing Diebold. He said vendors can't possibly comply with the statute because they can't legally place system components from third-party vendors in escrow.

Hanna said other states dictate that proprietary source code be placed in escrow, but not third-party code. He said he doesn't know how the fight in North Carolina will affect Diebold's status there.

Complaints Prompt Lenovo to Update ThinkPad BIOS

BY MATT HAMBLEN

Under the heading of laptop computer problems, there are minor issues and major issues. Laptop support engineer Kim Kramaric has identified a third category: annoying issues.

Kramaric, a support engineer at 2KDesign in Copenhagen, said last week that he has been trying to fix a problem affecting 50 Lenovo (formerly IBM) ThinkPad T43 laptops for nearly five months.

Kramaric needs to provide two hard disk drives for each of his company's T43 laptops. Last June, while attempting to add the second drives, which are from Hitachi Ltd., he made a discovery. After booting the machines with the extra drives, a "POST 2010" message would appear, preventing further steps unless the user pressed the Escape key.

Nothing major, just annoying. "That wasn't very satisfactory for a premium computer," Kramaric said, referring to the T43, which starts at $1,300.

Not Major, but Widespread

It turns out that hundreds of T43 users worldwide had noticed the same problem when using drives that Lenovo Group Ltd. didn't support, according to user forums. Since the problem was first noticed in May, about 100 users have posted comments about the problem at the Independent ThinkPad Open Forum site.

Last week, Lenovo posted a BIOS update that lets the T43 start up without requiring users to press the Escape key when the POST 2010 warning message appears. Users who tried out the BIOS posted messages at a user forum last week saying that the fix requires a user to wait 10 seconds and listen for a beep before proceeding. Nonetheless, Kramaric said he's eager to try out the fix, since the Hitachi drives cost less than half the price of Lenovo drives.

But the experience left Kramaric questioning Lenovo's commitment to support. "On a scale of 1 to 10, their score hits rock bottom at 1," he said.

A Lenovo spokesman and industry analysts said the problem is fairly minor and argued that the company's sales since the May acquisition of IBM's PC unit show that users seem to like Lenovo products.

"People are upset about [the POST 2010 error]," a Lenovo spokesman said. "But it's not a hugely overarching issue.

Richard Shim, an analyst at IDC, agreed that this "smaller-scale" problem gained prominence because it affects a mainstream laptop that has probably been sold to hundreds of thousands of users. "It doesn't sound like [the problem] would have a material impact on Lenovo revenues," he said.

In fact, Lenovo has nearly reached the market share IBM had before it sold the vendor its PC division. Lenovo had 7.7% of global laptop and PC sales in the third quarter of 2005, and IBM's PC division had about 8% of the market in the third quarter of 2004, Shim said.

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Security Concerns Cloud Online Shopping

Survey reveals consumer fear over data privacy, identity theft and fraud

BY JAIKUMAR VIJAYAN

THE BIG increase in online sales that is expected this holiday shopping season comes amid what appears to be unprecedented consumer concern over data privacy, online fraud and identity theft.

The results of a new survey of 1,005 consumers released last week show that although 78% of U.S. Internet users plan to shop online this year, more than 69% of those shoppers will limit their online purchasing because of concerns associated with the safety of their personal information.

The survey was conducted by Truste, a nonprofit privacy organization in San Francisco, and market research firm Taylor Nelson Sofres PLC in New York. More than 40% of the respondents said that privacy-related concerns would deter them from purchasing from smaller online retailers. About 22% said they won't be purchasing online at all. The survey was conducted online between Oct. 27 and Nov. 1.

"There's definitely a reason for both consumers and merchants to feel more concerned" about data security and privacy issues compared with previous years, said John Pescatore, an analyst at Stamford, Conn.-based Gartner Inc.

Assessing the Risks

For consumers, the biggest risks come from hackers' increasing use of keystroke-logging and password-acquisition tools, Pescatore said. Such remote access tools let cyberthieves capture sensitive information, such as credit card numbers, from consumers who are conducting business online, he said.

A Gartner study conducted in March showed that despite a higher awareness of phishing scams, a large number of consumers continue to be fooled into visiting Web sites that download such hacker tools, Pescatore added.

And it's not only consumers who need to be wary about the increasing proliferation of such tools. Companies whose employees use corporate systems to buy online should also be concerned, said Charles King, a product manager at Blue Coat Systems Inc., a Sunnyvale, Calif.-based security vendor.

According to King, the encrypted connections between employees and the shopping sites they go to can often be used as a conduit for spyware, bot programs, viruses and worms. Such encrypted sessions are often allowed to pass through untouched to employees' PCs, raising all sorts of security issues, he said.

"Encrypted communications are agnostic. It doesn't tell you if the traffic is good or bad," said Pete Lindstrom, an analyst at Spire Security LLC in Malvern, Pa. So companies need to have controls in place — such as proxies to terminate Secure Sockets Layer traffic — to ensure that employees' shopping behavior doesn't pose a security risk, he said.

The results from the Truste survey appear to reinforce the findings of other recent surveys.

In a nationwide survey of 1,009 consumers conducted by Forrester Custom Consumer Research for the Business Software Alliance, one in four consumers said they would not shop online because of Internet security concerns.

Another survey, released on Nov. 22 by Sun Microsystems Inc., showed that 83% of the 2,008 consumers polled think they're most susceptible to identity theft during the holiday season.



But Cathy Hotka, senior vice president of technology and business development at the Retail Industry Leaders Association in Washington, said much of the concern about online security is overblown.

"I don't believe for a second that anybody's enthusiasm has been dampened" because of online security concerns, Hotka said.

"The track record of online security is great. We've demonstrated safe e-commerce for years, and consumers love it," she said. "If anything, there's concern about phishing and the effect that it can have on brand."

Users Slow to Back Up Data Off-site

Hurricanes spur move to disk backups, but data still stored locally

BY LUCAS MEARIAN

More companies are making disk-to-disk backups for data protection in the wake of hurricanes Katrina and Wilma, but there's one problem: Many are keeping that duplicate data locally, where it's still vulnerable to the effects of a disaster.

Last week, Gartner Inc. released a survey of 104 North American IT managers that found that 45% of respondents back up or replicate data to another disk, up from just 6% who did so in 2004. Yet 70% of the respondents who make backups said they do so to a local device, according to the September survey.

Companies should be sending their backup data to a distant, off-site facility that's owned either by the company or a storage service provider so that a local catastrophe doesn't wipe out both the original and backup copies, said Gartner analyst Adam Couture.

Some users are moving in the right direction. Dale Caldwell, a systems programmer at Grange Insurance Group in Seattle, said that until a year ago, his company performed nightly batch data backups that took 13 hours to complete and stored the tapes at an office in another part of the city.

But after 9/11 and a recent spate of natural disasters, regulators pushed Grange to establish disaster recovery plans that involve replicating critical data to more-distant locations.

So Caldwell now replicates data from a virtual tape library (VTL) in Grange's main data center to a center in Spokane, Wash., 230 miles away. He said he's using a VTL controller from Bus-Tech Inc. in Burlington, Mass., to store and retrieve mainframe tape data sets, eliminating most of his tape infrastructure.

"The [off-site replication] has been really wonderful. There's a lot of time savings to it," Caldwell said. He said the disk-to-disk replication knocked two hours off his nightly backups and cut the time needed for data restorations from two hours with tape to 45 minutes with disk.

Online Backups

Christopher Varner, chief technology officer at DDJ Capital Management LLC in Wellesley, Mass., said he's planning a move away from tape backup to an online data backup and recovery scheme from EVault Inc. in Emeryville, Calif., and SunGard Data Systems Inc. in Wayne, Pa.

DDJ Capital plans to install a backup storage server on its LAN running EVault software for regular backups to restore deleted files locally. It also plans to have a duplicate backup server replicate data over the Internet to a SunGard data center that also runs EVault.

"This enhances our disaster recovery capabilities and also makes backups easier for my staff," Varner said. "No more taking tapes home every night or dealing with the hassle of rotating our tape library in the bank safe-deposit box."

The local vault will be used as necessary to restore deleted files, and the off-site backup will be used for disaster recovery, Varner said.

The Gartner survey also showed that IT managers are becoming more comfortable with using managed storage services to copy data off-site. Over the past two years, Couture said, 30% to 40% of IT managers surveyed indicated that they would never use a third-party service provider. But in the most recent survey, that number had plummeted to 6%.

Gartner's poll also showed that data security is becoming a priority for IT managers, following numerous highly publicized data-loss incidents this year. Indeed, 55% of those surveyed said they encrypt all backup files, and 50% said they will review internal policies for access to backup data.

"One of the advantages of using a service provider for remote backup service is that they encrypt everything before it's sent — and, of course, nobody is touching a physical tape or putting it on the truck," Couture said.

THE PAPER AND INK USED IN THE ORIGINAL PUBLICATION MAY AFFECT THE QUALITY OF THE MICROFORM EDITION

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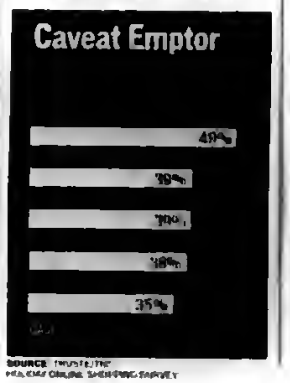
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"One of the advantages of using a service provider for remote backup service is that they encrypt everything before it's sent — and, of course, nobody is touching a physical tape or putting it on the truck," Couture said.

Security Concerns Cloud Online Shopping

Survey reveals consumer fear over data privacy, identity theft and fraud

BY JAIKUMAR VIJAYAN

THE BIG increase in online sales that is expected this holiday shopping season comes amid what appears to be unprecedented consumer concern over data privacy, online fraud and identity theft.

The results of a new survey of 1,005 consumers released last week show that although 78% of U.S. Internet users plan to shop online this year, more than 69% of those shoppers will limit their online purchasing because of concerns associated with the safety of their personal information.

The survey was conducted by Truste, a nonprofit privacy organization in San Francisco, and market research firm Taylor Nelson Sofres PLC in New York. More than 40% of the respondents said that privacy-related concerns would deter them from purchasing from smaller online retailers. About 22% said they won't be purchasing online at all. The survey was conducted online between Oct. 27 and Nov. 1.

"There's definitely a reason for both consumers and merchants to feel more concerned" about data security and privacy issues compared with previous years, said John Pescatore, an analyst at Stamford, Conn.-based Gartner Inc.

Assessing the Risks

For consumers, the biggest risks come from hackers' increasing use of keystroke-logging and password-acquisition tools, Pescatore said. Such remote access tools let cyberthieves capture sensitive information, such as credit card numbers, from consumers who are conducting business online, he said.

A Gartner study conducted in March showed that despite a higher awareness of phishing scams, a large number of consumers continue to be fooled into visiting Web sites that download such hacker tools, Pescatore added.

And it's not only consumers who need to be wary about the increasing proliferation of such tools. Companies whose employees use corporate systems to buy online should also be concerned, said Charles King, a product manager at Blue Coat Systems Inc., a Sunnyvale, Calif.-based security vendor.

According to King, the encrypted connections between employees and the shopping sites they go to can often be used as a conduit for spyware, bot programs, viruses and worms. Such encrypted sessions are often allowed to pass through untouched to employees' PCs, raising all sorts of security issues, he said.

"Encrypted communications are agnostic. It doesn't tell you if the traffic is good or bad," said Pete Lindstrom, an analyst at Spire Security LLC in Malvern, Pa. So companies need to have controls in place — such as proxies to terminate Secure Sockets Layer traffic — to ensure that employees' shopping behavior doesn't pose a security risk, he said.

The results from the Truste survey appear to reinforce the findings of other recent surveys.

In a nationwide survey of 1,009 consumers conducted by Forrester Custom Consumer Research for the Business Software Alliance, one in four consumers said they would not shop online because of Internet security concerns.

Another survey, released on Nov. 22 by Sun Microsystems Inc., showed that 83% of the 2,008 consumers polled think they're most susceptible to identity theft during the holiday season.



But Cathy Hotka, senior vice president of technology and business development at the Retail Industry Leaders Association in Washington, said much of the concern about online security is overblown.

"I don't believe for a second that anybody's enthusiasm has been dampened" because of online security concerns, Hotka said.

"The track record of online security is great. We've demonstrated safe e-commerce for years, and consumers love it," she said. "If anything, there's concern about phishing and the effect that it can have on brand."

Users Slow to Back Up Data Off-site

Hurricanes spur move to disk backups, but data still stored locally

BY LUCAS MEARIAN

More companies are making disk-to-disk backups for data protection in the wake of hurricanes Katrina and Wilma, but there's one problem: Many are keeping that duplicate data locally, where it's still vulnerable to the effects of a disaster.

Last week, Gartner Inc. released a survey of 104 North American IT managers that found that 45% of respondents back up or replicate data to another disk, up from just 6% who did so in 2004. Yet 70% of the respondents who make backups said they do so to a local device, according to the September survey.

Companies should be sending their backup data to a distant, off-site facility that's owned either by the company or a storage service provider so that a local catastrophe doesn't wipe out both the original and backup copies, said Gartner analyst Adam Couture.

Some users are moving in the right direction. Dale Caldwell, a systems programmer at Grange Insurance Group in Seattle, said that until a year ago, his company performed nightly batch data backups that took 13 hours to complete and stored the tapes at an office in another part of the city.

But after 9/11 and a recent spate of natural disasters, regulators pushed Grange to establish disaster recovery plans that involve replicating critical data to more-distant locations.

So Caldwell now replicates data from a virtual tape library (VTL) in Grange's main data center to a center in Spokane, Wash., 230 miles away. He said he's using a VTL controller from Bus-Tech Inc. in Burlington, Mass., to store and retrieve mainframe tape data sets, eliminating most of his tape infrastructure.

"The [off-site replication] has been really wonderful. There's a lot of time savings to it," Caldwell said. He said the disk-to-disk replication knocked two hours off his nightly backups and cut the time needed for data restorations from two hours with tape to 45 minutes with disk.

Online Backups

Christopher Varner, chief technology officer at DDJ Capital Management LLC in Wellesley, Mass., said he's planning a move away from tape backup to an online data backup and recovery scheme from EVault Inc. in Emeryville, Calif., and SunGard Data Systems Inc. in Wayne, Pa.

DDJ Capital plans to install a backup storage server on its LAN running EVault software for regular backups to restore deleted files locally. It also plans to have a duplicate backup server replicate data over the Internet to a SunGard data center that also runs EVault.

"This enhances our disaster recovery capabilities and also makes backups easier for my staff," Varner said. "No more taking tapes home every night or dealing with the hassle of rotating our tape library in the bank safe-deposit box."

The local vault will be used as necessary to restore deleted files, and the off-site backup will be used for disaster recovery, Varner said.

The Gartner survey also showed that IT managers are becoming more comfortable with using managed storage services to copy data off-site. Over the past two years, Couture said, 30% to 40% of IT managers surveyed indicated that they would never use a third-party service provider. But in the most recent survey, that number had plummeted to 6%.

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CASE STUDY:
A HIPAA Hospital Diagnosis
Facing important HIPAA compliance deadlines, a regional hospital in the Southwest turned to Insight for help. The hospital wanted an outside review to ensure its systems could pass the test. Diagnosing everything from data backup and virus protection to Web and facility security, Insight's Secure IT Remote Risk Assessment identified important issues, prioritized risks and proposed solutions to solve them. Armed with this information, the IT team can now focus its efforts to realize HIPAA data security compliance.
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Client Security 3.0 (10-24 Users)
Starting at $47.81
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BRIEFS

HP's Top Software Executive Resigns

The top software executive at Hewlett-Packard Co. has resigned for personal reasons and will leave the company on Dec. 9. Nora Denzel, senior vice president and general manager of HP's Software Global Business Unit, has been at HP since 2000. Denzel will be replaced temporarily by Todd DeLaughter, senior vice president and general manager of HP's OpenView Business Unit.

New Firefox Browser Release Finally Ships

After a host of test releases and a false start, a new version of the Firefox browser shipped last week. Firefox, which was downloaded more than 100 million times in October, is an alternative to Microsoft Corp.'s Internet Explorer. Version 1.5 includes a wizard that lets users report Web sites that don't work in the Mozilla Foundation's browser in order to help developers ensure that sites that support IE also work in Firefox.

HP Buys OpenView Partner Trustgenix

HP has agreed to buy identity management software maker Trustgenix Inc. for an undisclosed sum. HP's OpenView Select Federation product is built around software licensed from Trustgenix. The product lets companies use Web single sign-on and cross-domain features to integrate with partners' systems. The deal is expected to close within 30 days.

Stratus, NEC Sign Development Pact

Stratus Technologies Inc. and NEC Corp. have signed a 10-year joint development and technology cross-licensing deal. The companies plan to jointly build high-availability servers. The first server is expected to be completed late next year. NEC also said it will increase its stake in Stratus to 5.4% with a $8 million investment.

ON THE MARK

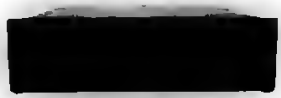
HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL



MATTHEW FAULKNER

ABBA Music to WAN Managers' . . .

. . . ears as new tool helps keep network humming. Next month, Streamcore System Inc. in Puteaux, France, will move its headquarters to Sunnyvale, Calif., and upgrade the software for its StreamGroomer WAN acceleration appliances. Key to the upgrade, says CEO Eric Jeux, is the new application behavior-based acceleration (ABBA) hardware. ABBA (not to be confused with the 1970s Scandinavian pop singing troupe) classifies application traffic across a WAN into three behavior types — interaction, transaction or transfer — and applies appropriate service levels, claims Jeux. For example, interaction between an end user and an application requires fast response times and is given the necessary bandwidth. Streamcore's appliances can handle traffic loads from 2Mbit to 300Mbit/sec. A typical installations starts around $30,000, Jeux says.



The StreamGroomer appliance promises to boost WAN performance.

Notes expanding Web services . . .

. . . features in next release. IBM will be giving Lotus Notes developers tools to let the popular corporate application consume a Web service *officially*. Today, you can publish a Web service in Notes for other apps to consume, but not the other way around. Mark Jordain, an IBM product manager, says some app creators have already solved that problem, but IBM doesn't officially support their work. However, when the next release of Notes appears late next year or early in 2007, IBM's support will be official. Also, expect to see a Linux client for Notes in the next release. Rob Ingram, another IBM product manager, acknowledges that customers aren't yet banging down IBM's door for a Linux client, but with corporate engineering departments shifting from Unix to Linux, the company expects to hear the tap-tap-tapping soon.



Filter out unnecessary data . . .

. . . for remote, online backups. Matt Medeiros observes that Hurricane Katrina should have disabused folks of the notion that storing backups across a campus or even across town is a good idea. Still, the CEO of Sunnyvale, Calif.-based SonicWall Inc. acknowledges that people are skeptical about the efficiencies of backing up PC-resident data across the Internet. He thinks that there will be fewer doubters in 2006, when his company releases a combination of content management and online backup technology that lets you "filter out data that is not mission-critical to the company."



Not only can you avoid backing up end-user MP3 files, but you can also skip saving every copy of a corporate memo on local drives. The SonicWall system, he claims, will know that only one memo needs to be retained. What's more, Medeiros contends, you won't have to churn through every file to see what's important. He says it will be done with simple scripts that can be written to eliminate file types, such as MP3s, or to ensure that anything labeled "confidential" does get saved off-site.

Glide through multimedia . . .

. . . creations effortlessly with a new service. So promises Donald Leka, CEO of New York-based TransMedia — if you sign up for his Glide Effortless service, which stores dozens of file formats, such as PowerPoint, Word, QuickTime, MP3, Flash and many more. With the GlideLink tools, you can drag and drop such files into a single presentation that can be streamed to the end users or groups you specify.

According to Leka, you can protect file access in numerous ways. For example, you can set the number of times a person can view a stream or download or forward a file, and you can revoke access after it has been given. The current release is geared toward consumers, with 100MB of online storage offered for free.

Later this month, a corporate version will be unveiled that, Leka says, "can provide a big company with a terabyte of storage." Today, GlideLink works only with Windows, but around Christmas, Mac users will get a version, and in January, even Linux desktop users will have one.

Americans tops in impatience . . .

. . . in global poll of help desk callers. Dimension Data Holdings PLC, an IT services and integration firm in Johannesburg, South Africa, conducted a study of 360 call centers across the globe and learned that people calling from the U.S. were likely to hang up the fastest if their call wasn't answered in a timely manner.



DIMENSION DATA HOLDINGS PLC

While callers from the Asia-Pacific region were willing to endure easy-listening arrangements of ancient Beatles tunes for an average of 72 seconds before slamming down the phone, Americans could tolerate that torture for only about half that time. Lesson? Answer U.S. calls first, or wait a bit, knowing they'll ring off before you need to say hello.


WebSphere
IBM

Tools for Integrating Mainframes, Web Services Get a New Home

SOA Software buys Merrill Lynch's transaction-processing software

BY HEATHER HAVENSTEIN

MERRILL LYNCH & Co. has sold a mainframe Web services tool set that processes 1.5 million transactions per day to SOA Software Inc., a service-oriented architecture management and governance vendor.

SOA Software, which is scheduled to announce the acquisition this week, has rebranded the products and plans to market them as tools that allow mainframe applications to expose and consume Web services, according to officials at the Santa Monica, Calif.-based company. Terms of the deal were not disclosed.

Eric Pulier, SOA Software's chairman and founder, said the acquisition will help its users solve a vexing problem: folding the 35-year-old CICS Transaction Server, which provides high-volume transaction processing for mainframes, into an SOA.

"Getting these CICS mainframes to become part of the new infrastructure has been problematic for us to deliver to our customers, [and] some of the largest companies in world have been struggling with this," Pulier said. "While people call it 'legacy,' it is very much alive and very much the bedrock of corporate America."

Merrill Lynch began designing what it called the X4ML Mainframe Web services platform in 2001; it's currently running the third version of the tools, which expose and consume more than 600 Web services. SOA Software plans to rename the technology Service Oriented Legacy Architecture (SOLA) and begin selling it this month both as a stand-alone product and integrated with its other tools. Four Merrill Lynch employees who developed the tools have left the company to join SOA Software.

Andrew Brown, chief technology architect at New York-based Merrill Lynch, said the tools were first used in the company's private client division. They're now also used in its institutional and asset management businesses. The company, which is one of the largest mainframe shops in the world, developed the tools internally because it couldn't find a commercial product four years ago that could scale in its environment, Brown said.

With a runtime written in assembly language and Cobol, the platform was developed for mainframe programmers to use to expose mainframe Web services, he added.

Brown said it took six months to persuade executive management to part with the platform.

"Executive managers are often uncomfortable with divestment, and often they don't understand the technology that well," Brown said. "Our management ended up very pleased with the transaction. The opportunity on the open market was such that [Merrill Lynch developers] needed to be able to take their idea and test it."

William Mougayar, an analyst at Aberdeen Group Inc., said that while several other vendors — such as Neon Systems Inc., AttachmateWRQ, NetManage Inc. and Webify Solutions Inc. — offer tools to enable mainframe applications to become services, SOLA also provides the ability to manage, secure and govern the services. ▶



IT Managers Seek Help With Web Services

Emerging tools promise to ease policy processes

BY HEATHER HAVENSTEIN

The spread of Web services has forced IT managers to seek out new tools to ease the cumbersome process of managing policies like security and performance.

"There are some policies that we think are best practices that we want to adhere to," said Chris Brown, senior IT architect at Charlotte, N.C.-based Wachovia Corp. "To date, adherence has been done manually, by review, [and] has been haphazard. We want to automate that."

A pair of vendors this week will be unveiling tools that promise to automate the process of managing Web services.

AmberPoint Inc. is releasing AmberPoint 5.0, a new version of its runtime services governance tools. And Mindreef Inc. is rolling out new services lifecycle management tools.

Security Functions

The MedicAlert Foundation plans to install the new AmberPoint tools over the next few months to better manage the various security credentials — user IDs and passwords or digital certificates — that its customers use to enter new health information into their MedicAlert records, according to SOA architect Jorge Mercado.

"[The new version] allows you to support any different number of security tokens," he said. "Your lowest level of Web service only has to understand one type of security token."

The Turlock, Calif.-based nonprofit health care information organization is now using Version 4.3 of AmberPoint's Web services management tools to monitor the performance of Web services that process data changes customers make over the Internet, Mercado said.

MedicAlert lets customers update via the Internet the health histories contained on MedicAlert USB devices that attach to key chains.

As users update their information, internal Web services spread the data to multiple systems, including order processing, billing and a medical information repository, Mercado added.

AmberPoint's updated tool includes policy management enhancements that allow companies to address issues such as security for large groups of services instead of one service at a time, said Ed Horst, vice president of marketing at the Oakland, Calif.-based vendor.

Mindreef plans to unveil a server-based product called Mindreef Coral that's designed to act as a hub housing Web service data. The hub allows development team members to cooperatively govern, test and support Web services, said Frank Grossman, president and founder of the Hollis, N.H.-based company.

Brown, a beta user of Coral, said the new tool will allow Wachovia to centralize policy conformance when building and testing Web services.

The emerging Web services governance and management tools can be used to help companies manage Web services as they are exposed to broader groups of users throughout the enterprise, said Ron Schmelzer, an analyst at ZapThink LLC in Waltham, Mass. ▶



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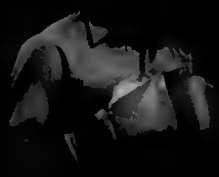
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THE

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BRIEFS

Cray Chief Scientist To Join Microsoft

The chief scientist at supercomputer maker Cray Inc. resigned his post last week to take an undisclosed job at Microsoft Corp. Burton Smith will leave Cray this week and is also stepping down as a director of the company. Smith was one of the founders of Tera Computer Co., which bought Cray Research from Silicon Graphics Inc. in 2000 and renamed itself Cray Inc.

Symantec Updates Compliance Tool

Symantec Corp. has brought out upgrades to the discovery tool for its Veritas Enterprise Vault e-mail and instant messaging archiving software. The new Compliance Accelerator Version 6.0 is designed to help financial services companies comply with U.S. Securities and Exchange Commission regulations and National Association of Securities Dealers rules that deal with electronic messaging.

Cisco to Purchase Security Service

Cisco Systems Inc. has agreed to buy Cybertrust Inc.'s Intellishield Alert Manager information service, including intellectual property and customer contracts, for $14 million in cash. Under the terms of the deal, Cisco will buy Cybertrust's Intellishield Alert Manager information service, which will be rolled into Cisco's MySDN security information Web site. The acquisition is expected to be completed early next year.

Japanese Firms Form RFID Group

Several major Japanese electronics makers have formed a consortium to study and coordinate the use of radio frequency identification tags for distribution-channel inventory management purposes. The Home Appliance Electronic Tag Consortium will work on guidelines that cover the way in which RFID tags are used.

IBM Launches Self-healing Tools

Expands autonomic computing wares

BY MATT HAMBLEN

IBM TIVOLI unveiled two new self-healing software tools last week, as well as a major revision of its IBM Tivoli Monitoring product, which features a new graphical interface to create programs that automatically respond to system problems.

Autonomic computing is gaining a following among infrastructure managers. Victor Kellan is CEO of LAN Solutions Inc., which provides network management services for about 20 companies. He said he's interested in all three IBM self-healing products and has been successfully using IBM's Autonomic Management Engine (AME) for about a year.

"I'm absolutely in favor of anything to further automate processes," Kellan said. "Our position is that this kind of software is the only way to control networks as they get larger. You can't keep throwing bodies at the problems."

Using AME has helped McLean, Va.-based LAN Solutions keep costs down while offering round-the-clock network management, he said.

Kellan said LAN Solutions has found that many customers, especially smaller businesses, are unfamiliar with autonomic software and tend to believe "you've got to have a person doing the monitoring."

Autonomic and self-healing management software products comprise an emerging niche in the $14 billion network and systems management global market, and sales of such products haven't been measured separately, said Stephen Elliot, an analyst at IDC. He said IBM Tivoli primarily competes with Computer Associates International Inc., BMC Software Inc. and Hewlett-Packard Co.

IBM said its new Tivoli Monitoring 6.1 oversees and fixes IT service-related problems in servers or databases for online applications such as e-mail.

"We have new capability to encode known [problems] in systems so if they are encountered, you can tell the system what action to take," said Ric Telford, vice president of autonomic computing at IBM.

The two new products are IBM Tivoli Composite Application Manager (CAM) and Tivoli System Automation for Multiplatforms, Telford said. System Automation can be used to spot failures on servers or operating systems that support complex applications and, using predetermined instructions, automatically return them to service. System automation capabilities have been available from IBM for mainframe users before, but they're now available for distributed systems with Linux, AIX and Windows, he said. CAM can be used to predict and fix bottlenecks that occur in different systems connected under a service-oriented architecture.

Tivoli Monitoring 6.1 starts at $700 per processor, the three versions of CAM start at $5,000 per processor, and System Automation starts at $1,100 per processor. All are available now.

NEW PRODUCTS

IBM Tivoli Monitoring 6.1: Manages and automatically corrects online applications, fixing problems across system components; **priced from $700 per processor.**

IBM Tivoli Composite Application Manager: Includes three products – CAM for SOA, CAM for WebSphere and CAM for Response Time Tracking – that predict and fix bottlenecks in service-oriented architectures; **priced from $5,000 per processor.**

IBM Tivoli System Automation for Multiplatforms: Brings mainframe automation to multiple platforms in distributed systems; **priced from $1,100 per processor.**

Quantum Adds Security to Storage Line

BY LUCAS MEARIAN

Quantum Corp. today will announce various security features for its tape and disk storage products — some available now and others planned for next year — to help IT managers do a better job of protecting stored data from unauthorized access and disclosures.

The San Jose-based vendor's technology road map calls for data encryption from the individual drive level all the way up to the array and library system. Quantum said it plans to unveil in the second half of next year native data-encryption capabilities through firmware embedded on silicon in the tape drive and on a special router on its tape libraries.

For starters, Quantum will announce a partnership with Decru Inc. in Redwood City, Calif., that will allow Quantum to resell Decru's DataFort encryption appliance to encrypt data being backed up on Quantum's tape and disk systems. Quantum will also offer physical locks on its tape libraries and disk drive arrays to prevent insider theft.

Moreover, the vendor plans to release DLTSage Tape Security, software that creates an electronic authentication key that gets embedded on a tape cartridge and restricts access to the data on that cartridge to authorized users. Jim Jonez, director of product marketing at Quantum, said DLTSage Tape Security is a free firmware upgrade that's available now on the new DLT-V4 drive and will be standard on the upcoming release of the DLT-S4 drive, which will be available next quarter.



Quantum has attached locks to either side of this disk array.

In mid-2006, Quantum will add an audit-trail feature to its DLTSage software so administrators can identify who has accessed backup systems.

Waiting for Users

Quantum's technology will appeal to any IT manager concerned about digital tapes failing off delivery trucks, said Jon Oltsik, an analyst at Enterprise Strategy Group Inc. in Milford, Mass.

But many companies haven't invested in storage security. In a recent survey of IT managers at more than 300 companies by Framingham, Mass.-based GlassHouse Technologies Inc., 54% of the respondents said they have no documented procedures for protecting stored data, 85% said they don't encrypt their backup data, and 70% rated their data storage security as only fair or poor.

Bill Dedi, senior systems administrator at Tellabs Inc., a $1.2 billion network systems manufacturer in Naperville, Ill., said storage security is a priority in his mind, but business executives haven't provided any funding for such technologies yet. "Security-wise, we don't have much in place," he said.

Dedi's IT group supports 200 Windows-based servers that are backed up to a virtual tape library, which then archives the data to a Quantum PX720 tape library using DLT320 tape drives. Dedi said he normally backs up about 14TB of data weekly.

While he may not be ready to upgrade to Quantum's upcoming encryption technology, Dedi said he does plan to use the DLTSage Tape Security upgrade. He said that, currently, there's a vulnerability because any drive can read any tape, but with the electronic key, "you're not going to be able to do that."

BRIEFS

Cray Chief Scientist To Join Microsoft

The chief scientist at supercomputer maker Cray Inc. resigned his post last week to take an undisclosed job at Microsoft Corp. Burton Smith will leave Cray this week and is also stepping down as a director of the company. Smith was one of the founders of Tera Computer Co., which bought Cray Research from Silicon Graphics Inc. in 2000 and renamed itself Cray Inc.

Symantec Updates Compliance Tool

Symantec Corp. has brought out upgrades to the discovery tool for its Veritas Enterprise Vault e-mail and instant messaging archiving software. The new Compliance Accelerator Version 6.0 is designed to help financial services companies comply with U.S. Securities and Exchange Commission regulations and National Association of Securities Dealers rules that deal with electronic messaging.

Cisco to Purchase Security Service

Cisco Systems Inc. has agreed to buy Cybertrust Inc.'s Intellishield Alert Manager information service, including intellectual property and customer contracts, for $14 million in cash. Under the terms of the deal, Cisco will buy Cybertrust's Intellishield Alert Manager information service, which will be rolled into Cisco's MySDN security information Web site. The acquisition is expected to be completed early next year.

Japanese Firms Form RFID Group

Several major Japanese electronics makers have formed a consortium to study and coordinate the use of radio frequency identification tags for distribution-channel inventory management purposes. The Home Appliance Electronic Tag Consortium will work on guidelines that cover the way in which RFID tags are used.

IBM Launches Self-healing Tools

Expands autonomic computing wares

BY MATT HAMBLEN

IBM TIVOLI unveiled two new self-healing software tools last week, as well as a major revision of its IBM Tivoli Monitoring product, which features a new graphical interface to create programs that automatically respond to system problems.

Autonomic computing is gaining a following among infrastructure managers. Victor Kellan is CEO of LAN Solutions Inc., which provides network management services for about 20 companies. He said he's interested in all three IBM self-healing products and has been successfully using IBM's Autonomic Management Engine (AME) for about a year.

"I'm absolutely in favor of anything to further automate processes," Kellan said. "Our position is that this kind of software is the only way to control networks as they get larger. You can't keep throwing bodies at the problems."

Using AME has helped McLean, Va.-based LAN Solutions keep costs down while offering round-the-clock network management, he said.

Kellan said LAN Solutions has found that many customers, especially smaller businesses, are unfamiliar with autonomic software and tend to believe "you've got to have a person doing the monitoring."

Autonomic and self-healing management software products comprise an emerging niche in the $14 billion network and systems management global market, and sales of such products haven't been measured separately, said Stephen Elliot, an analyst at IDC. He said IBM Tivoli primarily competes with Computer Associates International Inc., BMC Software Inc. and Hewlett-Packard Co.

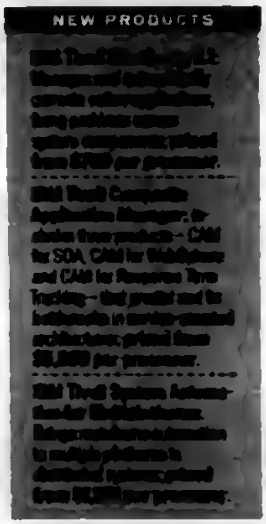
IBM said its new Tivoli Monitoring 6.1 oversees and fixes IT service-related problems in servers or databases for online applications such as e-mail.

"We have new capability to encode known [problems] in systems so if they are encountered, you can tell the system what action to take," said Ric Telford, vice president of autonomic computing at IBM.

The two new products are IBM Tivoli Composite Application Manager (CAM) and Tivoli System Automation for Multiplatforms, Telford said. System Automation can be used to spot failures on servers or operating systems that support complex applications and, using predetermined instructions, automatically return them to service. System automation capabilities have been available from IBM for mainframe users before, but they're now available for distributed systems with Linux, AIX and Windows, be said. CAM can be used to predict and fix bottlenecks that occur in different systems connected under a service-oriented architecture.

Tivoli Monitoring 6.1 starts at $700 per processor, the three versions of CAM start at $5,000 per processor, and System Automation starts at $1,100 per processor. All are available now.

NEW PRODUCTS



Quantum Adds Security to Storage Line

BY LUCAS MEARIAN

Quantum Corp. today will announce various security features for its tape and disk storage products — some available now and others planned for next year — to help IT managers do a better job of protecting stored data from unauthorized access and disclosures.

The San Jose-based vendor's technology road map calls for data encryption from the individual drive level all the way up to the array and library system. Quantum said it plans to unveil in the second half of next year native data-encryption capabilities through firmware embedded on silicon in the tape drive and on a special router on its tape libraries.

For starters, Quantum will announce a partnership with Decru Inc. in Redwood City, Calif., that will allow Quantum to resell Decru's DataFort encryption appliance to encrypt data being backed up on Quantum's tape and disk systems. Quantum will also offer physical locks on its tape libraries and disk drive arrays to prevent insider theft.

Moreover, the vendor plans to release DLTSage Tape Security, software that creates an electronic authentication key that gets embedded on a tape cartridge and restricts access to the data on that cartridge to authorized users. Jim Jonez, director of product marketing at Quantum, said DLTSage Tape Security is a free firmware upgrade that's available now on the new DLT-V4 drive and will be standard on the upcoming release of the DLT-S4 drive, which will be available next quarter.



Quantum has attached locks to either side of this disk array.

In mid-2006, Quantum will add an audit-trail feature to its DLTSage software so administrators can identify who has accessed backup systems.

Waiting for Users

Quantum's technology will appeal to any IT manager concerned about digital tapes falling off delivery trucks, said Jon Oltsik, an analyst at Enterprise Strategy Group Inc. in Milford, Mass.

But many companies haven't invested in storage security. In a recent survey of IT managers at more than 300 companies by Framingham, Mass.-based GlassHouse Technologies Inc., 54% of the respondents said they have no documented procedures for protecting stored data, 85% said they don't encrypt their backup data, and 70% rated their data storage security as only fair or poor.

Bill Dedi, senior systems administrator at Tellabs Inc., a $1.2 billion network systems manufacturer in Naperville, Ill., said storage security is a priority in his mind, but business executives haven't provided any funding for such technologies yet. "Security-wise, we don't have much in place," he said.

Dedi's IT group supports 200 Windows-based servers that are backed up to a virtual tape library, which then archives the data to a Quantum PX720 tape library using DLT320 tape drives. Dedi said he normally backs up about 14TB of data weekly.

While he may not be ready to upgrade to Quantum's upcoming encryption technology, Dedi said he does plan to use the DLTSage Tape Security upgrade. He said that, currently, there's a vulnerability because any drive can read any tape, but with the electronic key, "you're not going to be able to do that."

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Security

security and privacy, analysts said.

While database vendors are beefing up security in their products, "companies should look to third-party vendors to supplement additional requirements that are not yet met by DBMS vendors, such as database firewalls, assessment, simplified encryption and granular auditing solutions," Forrester Research Inc. analyst Noel Yuhanna wrote in a Nov. 29 report.

Other observers said users have focused on guarding the entry points to their networks when they should be worrying about internal threats posed by unscrupulous employees with high-level access.

"At Fort Knox, the fuss isn't about who's guarding the brick wall — it's who's watching the gold," said Raj Sablach, senior vice president of operations at Embarcadero Technologies Inc. The San Francisco-based vendor offers a real-time database activity monitor that Sablach said is easier to use than built-in tools and doesn't slow the database.

Other vendors of database security tools include Lumigent Technologies Inc., IP-Locks Inc., Guardium Inc. and Protegrity Corp.

Built-in Functions

Users and analysts agree that the latest commercial databases are much more secure out of the box than their predecessors.

For example, Microsoft Corp. now acknowledges that its SQL Server 2000 was installed with many security features turned off by default. Ease of use was the reason, but it led to one notorious hole in which Windows systems administrator accounts were also automatically given administrator accounts on SQL Server, said Jon Hwang, senior database administrator at OpenTable Inc. in San Francisco.

"It's better if vendors assume you might have a very junior crew of DBAs and prevent a lot of these loopholes upfront," said Hwang, who runs SQL Server 2000 to support OpenTable's Web-based restaurant reservations system. He's testing the 2005 version, which he says provides a "dramatic" improvement in security.

Tom Rizzo, Microsoft's product manager for SQL Server, said that besides new features such as encryption of data "at rest" within the database, SQL Server's configuration tool turns off some features, such as support for native Web services, to keep inexperienced database administrators from inadvertently creating security holes. SQL Server 2005 even challenges administrators who try to create accounts without passwords by scolding them in pop-up messages, though it stops short of blocking the practice.

"We think that's like driving at 120 miles an hour without seat belts," Rizzo said.

But, he added, "we have to make SQL Server flexible as well as secure."



Rizzo also welcomed third-party providers of database security tools. "We are not threatened," he said. "We live and die by our partners."

Oracle Corp., in contrast, suggested that features built into its July release of Oracle 10g R2 — such as identity management, encryption and security hole scanning — should be enough for users.

"We already do what most of these third-party tools do today," said Paul Needham, director of database security at Oracle.

That's debatable, said Peter O'Kelly, an analyst at Midvale, Utah-based Burton Group. But the trend of database vendors adding security features will only grow. That could crowd out third-party vendors, which will have to stay ahead of the big vendors in terms of features or be content to sell to users of older, less-secure versions of databases or to those who run databases from multiple vendors and are seeking convenient, centralized reports, O'Kelly said.

Whether all of this leads to truly increased data security depends on database administrators following best practices using either built-in or third-party tools.

"You can't expect magic," O'Kelly said. "You still have to read the manual."

Continued from page 1

Ingres

ists said it's a bit like déjà vu, having listened to similar rhetoric when Ingres was acquired by CA in 1994.

"On the face of it, the announcement looks good," said Andy Park, information services project manager at the Pesticides Safety Directorate of the U.K. government, which has used Ingres since 1992. Park called it "rock solid" and less problematic than other databases he manages, such as SQL Server and MySQL.

"But what will happen in two to three years' time? Will the owners decide to sell the product and take their money elsewhere? It is a big opportunity for Ingres but a risk for existing users," he said.

Chairman and Interim CEO Terry Garnett, an enterprise software executive turned venture capitalist, on Nov. 7 finalized his takeover of the Ingres product line from CA. CA will retain 20% of the Redwood City, Calif.-based firm.

The New Ingres

Ingres Corp.

- Majority-owned by venture capital firm Garnett & Helfrich; CA retains a 20% stake.
- New owners plan to double the 100-employee head count.
- Has 8,000 to 10,000 users, many outside the U.S.
- Latest open-source version, Ingres R3, is free; company charges $2,000 per processor per year for support.

Ingres' business strategy will be to woo users with its comparatively cheap $2,000-per-CPU annual support fee and target users that are adding databases, rather than tackling the more difficult task of convincing them to migrate their existing ones, said Chief Technology Officer Dave Dargo, who, like Garnett, is an Oracle Corp. veteran.

"I am a lot happier about their plans for the product and how this will benefit us current users, not only in terms of raising the profile of Ingres but also increased investment into the technology," said David Postle, chairman of the U.K. Ingres Users Association.

According to Curt Monash, a consultant in Acton, Mass., and a *Computerworld* columnist, Ingres' technical features fall somewhere between those of the big commercial databases and the leading open-source ones. In his blog, DBMS2.com, Monash wrote that Ingres R3 "definitely seems to lag in data warehousing," but it is comparable with Oracle's previous version, 9i, in terms of online transaction-processing features and is "certainly ahead of MySQL 5.0."

Vendor revenues from open-source databases are expected to rise from $250 million this year to $1 billion in 2008, according to Forrester Research Inc. But Ingres must convince open-source developers to adopt and evangelize for Ingres at a time when more buzzworthy alternatives such as MySQL or Postgres exist.

Attracting a strong developer following failed to happen under CA. For example, last year, the company offered $1 million in prizes to open-source developers who created migration tools from other databases to Ingres, but it was only able to give away half of the prize money.

That doesn't surprise Mark Brewer, CEO of Walnut Creek, Calif.-based Covalent Technologies Inc.

"Even though Ingres is as rich functionality-wise as Oracle, software developers in college don't think Ingres is sexy," said Brewer. "The only community Ingres has is its existing user base."

That community is much smaller today than it was in previous years, with only 8,000 to 10,000 users worldwide, according to Ingres. The North American Ingres Users Association has been largely inactive for several years, said sources. But one Ingres user conference last year drew about 150 attendees, according to Nick Vancas, president of Ingres support provider Database Management Technology Inc., which co-sponsored the event with CA.

According to Park, "CA never managed to capture the imagination of the open-source community. We run both Ingres and MySQL internally, and Ingres is so far advanced in ease of use, performance and robustness. But when people think of open-source databases, they do not think Ingres. In my opinion, this is the battle that matters."

And it's one they are likely to lose, said Peter O'Kelly, an analyst at Midvale, Utah-based Burton Group. He said Ingres will have a hard time "standing out," with open-source databases on one side and free versions of Oracle and SQL Server on the other.

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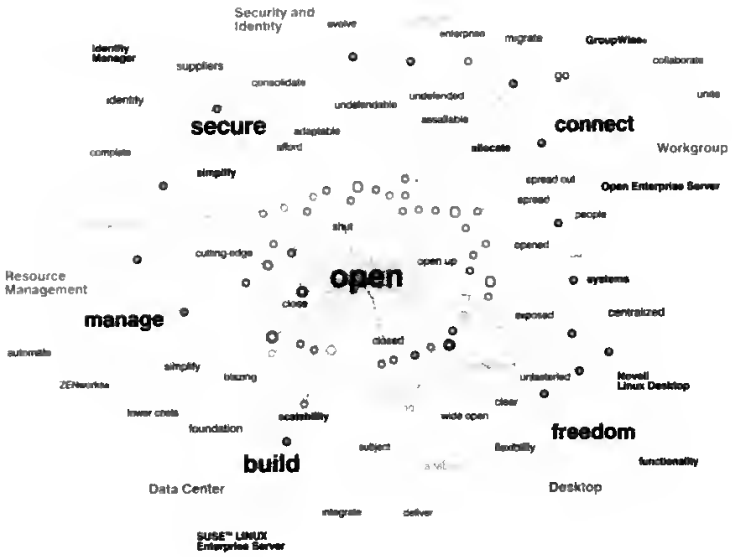
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GLOBAL

An International IT News Digest

Court Puts T-Online Acquisition on Hold

BONN, GERMANY

A GERMAN COURT last week dealt Deutsche Telekom AG a setback in its effort to reacquire the piece of T-Online International AG that it doesn't already own.

The Darmstadt District Court rejected the Bonn-based firm's purchase of the remaining 26% of T-Online until pending shareholder lawsuits are cleared.

Darmstadt-based T-Online was spun out of Deutsche Telekom in 1996 under its former Online Pro Dienste moniker. Deutsche Telekom remained the major shareholder of the firm, which changed its name to T-Online in 2000.

Just over a year ago, Deutsche Telekom mounted an effort to buy the remaining stake in T-Online for €3 billion ($3.5 billion U.S.). A group of minority shareholders contested the move, filing more than 25 lawsuits earlier this year.

If the merger is completed, T-Online will remain a separate organization responsible for developing IP services and applications. Last month, Deutsche Telekom Chief Financial Officer Karl-Gerhard Eick said he expects to complete the acquisitinn in early 2006.

■ JOHN BLAU, IDG NEWS SERVICE

GLOBAL FACT

Economic output growth in the U.K. in August 2005 compared with August 2004. Total sales were £1.54 billion ($2.7 billion U.S.) in August 2005.

Fujitsu Execs Lose Pay Over Exchange Failure

TOKYO

TOP MANAGERS at Fujitsu Ltd. will see their pay cut as punishment for a major computer failure at the Tokyo Stock Exchange that delayed trading on Nov. 1.

Fujitsu was blamed by the exchange for problems that delayed the start of trading for about four and a half hours that day.

The pay of President Hiroaki Kurokawa will be cut in half for six months while the salary of two vice presidents, Michiyoshi Mazuka and Koichi Hironishi, will be cut by a quarter for the same period, the company said.

The computer glitch was traced back to the incorrect patching of a file in mid-October during an upgrade to the trading system. A bug was found in an existing program, but Tokyo-based Fujitsu provided incorrect instructions on how to patch it, accordiog to the exchange.

The punishments dished out by Fujitsu closely mirror those imposed earlier on senior executives at the stock exchange.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Consortium to Build $3B Indian Chip Plant

BANGALORE, INDIA

A CONSORTIUM OF investors is planning to raise up to $3 billion to build a semiconductor fabrication plant in India in collaboration with the Indian government and Advanced Micro Devices Inc.

The consortium, called SemIndia Inc., hopes to tap into a growing Indian demand for semiconductors, which officials said could be worth up to $15 billion for logic chips alone in 10 years. The group last week said it has yet to decide on a location for the plant.

SemIndia officials also declined to identify its investors, but sources have indicated that they will include private investors, the Indian government and possibly Sunnyvale, Calif.-based AMD.

SemIndia also said last week that it has signed an agreement to license AMD's process technology for use in the plant. The agreement also calls for AMD and SemIndia to jointly develop and market semiconductor products for India.

The new plant will make microprocessors for PCs and logic chips for mobile phones, set-top boxes and other devices.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Samsung May Face Probe for Apple Deal

SEOUL

SOUTH KOREA'S Fair Trade Commission is reviewing whether to launch an investigation into Samsung Electronics Co. following press reports that it sold NAND flash memory chips to Apple Computer Inc. at below-market prices.

A commission official said he expects a decision on whether to investigate the matter to come early next year.

Yi Seuk-joon, who heads the Competition Policy Division of the commission, said there have been no complaints yet from competitors. The review was prompted by reports in the local South Korean press that alleged unfair pricing of chips, which could hurt smaller rivals.

Yi said that it was too early to discuss possible penalties facing Samsung.

A Samsung spokesman said that the company is cooperating with authorities but would not comment further.

Samsung began supplying NAND flash memory chips to Cupertino, Calif.-based Apple in the third quarter. The chips are used in some of Apple's iPod music players, such as the Nano and Shuffle, which store data on flash memory.

■ ANDREW SALMON, IDG NEWS SERVICE

Dutch Firm Launches Net Address System

AMSTERDAM

A DUTCH COMPANY has launched a new Internet addressing service that does away with common top-level domains (TLD), such as .com and .edu, and allows Internet addresses to end with the name of a business or virtually any other word.

Amsterdam-based UnifiedRoot S&M BV said it has set up 13 master root servers around the world to run its Domain Name System, which will run "in parallel" with the principal Internet DNS run by the Internet Corporation for Assigned Names and Numbers.

UnifiedRoot said it doesn't plan to register domains that are already registered by Marina Del Rey, Calif.-based ICANN.

The effort requires cooperation from Internet service providers, which must update DNS server directories in order for them to include UnifiedRoot's DNS servers. Without that service provider help, end users would have to reconfigure individual PCs to recognize the UnifiedRoot TLDs.

UnifiedRoot won't register TLDs that infringe on another company's intellectual property, such as a trademark, it said. Amsterdam-based TMF Group will oversee the effort's registrations and financial management.

■ JAMES NICCOLAI, IDG NEWS SERVICE

Briefly Noted

China.com Inc. **has promoted Albert Lam to CEO, replacing Rudy Chan, who is leaving the company. Lam had been China.com's president and chief operating officer and was CEO of its Newpalm (China) Information Technology Co. unit. China.com, a subsidiary of CDC Corp., sells multimedia message services and wireless application protocol products.**

■ SUMNER LEMON, IDG NEWS SERVICE

Achievo Corp. **in Dublin Calif., has agreed to acquire Chinese outsourcing provider Joyo Computer Technology Ltd. for an undisclosed sum. Achievo, also an outsourcing service provider, said the purchase of Guangzhou-based Joyo will help expand its technical resources in China, where it already has operations in Beijing, Shanghai, Dalian and Shenzhen.**

Two former presidents of Sanyo Electric Co., **Sadao Kondo and Yukinori Kuwano, have resigned from the Osaka, Japan-based company's board of directors. Sanyo has been restructuring in the wake of widening losses. Its plans call for cutting Sanyo's workforce by 15%, or 14,400 workers, over the next three years.**

ANZ Banking Group Ltd. **in Sydney, Australia, has confirmed plans to increase its offshore workforce in India from 650 to 1,000 over the next 18 months. ANZ said the bank plans to shift an undetermined number of IT back-office positions to the Bangalore operation as part of the move.**

■ SANDRA ROSSI, COMPUTERWORLD AUSTRALIA

Elitegroup Computer Systems Co., **a Taipei, Taiwan-based contract electronics manufacturer, has completed the purchase of Tatung Co.'s desktop computer division. Elitegroup said the NT$6.7 billion ($200 million U.S.) acquisition will increase its manufacturing capacity of notebook and desktop PCs for resellers such as Hewlett-Packard Co. Tatung is also based in Taipei.**

■ DAN NYSTEDT, IDG NEWS SERVICE

Page compiled by Mike Bucken.

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TOKYO

TOP MANAGERS at Fujitsu Ltd. will see their pay cut as punishment for a major computer failure at the Tokyo Stock Exchange that delayed trading on Nov. 1.

Fujitsu was blamed by the exchange for problems that delayed the start of trading for about four and a half hours that day.

The pay of President Hiroaki Kurokawa will be cut in half for six months while the salary of two vice presidents, Michiyoshi Mazuka and Koichi Hironishi, will be cut by a quarter for the same period, the company said.

The computer glitch was traced back to the incorrect patching of a file in mid-October during an upgrade to the trading system. A bug was found in an existing program, but Tokyo-based Fujitsu provided incorrect instructions on how to patch it, according to the exchange.

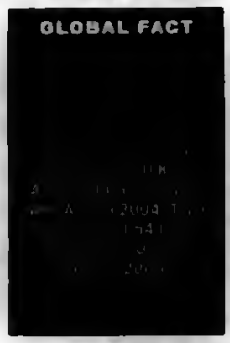
The punishments dished out by Fujitsu closely mirror those imposed earlier on senior executives at the stock exchange.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Consortium to Build $3B Indian Chip Plant

BANGALORE, INDIA

A CONSORTIUM OF investors is planning to raise up to $3 billion to build a semiconductor fabrication plant in India in collaboration with the Indian government and Advanced Micro Devices Inc.



The consortium, called SemIndia Inc., hopes to tap into a growing Indian demand for semiconductors, which officials said could be worth up to $15 billion for logic chips alone in 10 years. The group last week said it has yet to decide on a location for the plant.

SemIndia officials also declined to identify its investors, but sources have indicated that they will include private investors, the Indian government and possibly Sunnyvale, Calif.-based AMD.

SemIndia also said last week that it has signed an agreement to license AMD's process technology for use in the plant. The agreement also calls for AMD and SemIndia to jointly develop and market semiconductor products for India.

The new plant will make microprocessors for PCs and logic chips for mobile phones, set-top boxes and other devices.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Samsung May Face Probe for Apple Deal

SEOUL

SOUTH KOREA'S Fair Trade Commission is reviewing whether to launch an investigation into Samsung Electronics Co. following press reports that it sold NAND flash memory chips to Apple Computer Inc. at below-market prices.

A commission official said he expects a decision on whether to investigate the matter to come early next year.

Yi Seuk-joon, who heads the Competition Policy Division of the commission, said there have been no complaints yet from competitors. The review was prompted by reports in the local South Korean press that alleged unfair pricing of chips, which could hurt smaller rivals.

Yi said that it was too early to discuss possible penalties facing Samsung.

A Samsung spokesman said that the company is cooperating with authorities but would not comment further.

Samsung began supplying NAND flash memory chips to Cupertino, Calif.-based Apple in the third quarter. The chips are used in some of Apple's iPod music players, such as the Nano and Shuffle, which store data on flash memory.

■ ANDREW SALMON, IDG NEWS SERVICE

Dutch Firm Launches Net Address System

AMSTERDAM

A DUTCH COMPANY has launched a new Internet addressing service that does away with common top-level domains (TLD), such as .com and .edu, and allows Internet addresses to end with the name of a business or virtually any other word.

Amsterdam-based UnifiedRoot S&M BV said it has set up 13 master root servers around the world to run its Domain Name System, which will run "in parallel" with the principal Internet DNS run by the Internet Corporation for Assigned Names and Numbers.

UnifiedRoot said it doesn't plan to register domains that are already registered by Marina Del Rey, Calif.-based ICANN.

The effort requires cooperation from Internet service providers, which must update DNS server directories in order for them to include UnifiedRoot's DNS servers. Without that service provider help, end users would have to reconfigure individual PCs to recognize the UnifiedRoot TLDs.

UnifiedRoot won't register TLDs that infringe on another company's intellectual property, such as a trademark, it said. Amsterdam-based TMF Group will oversee the effort's registrations and financial management.

■ JAMES NICCOLAI, IDG NEWS SERVICE

Briefly Noted

China.com Inc. has promoted Albert Lam to CEO, replacing Rudy Chan, who is leaving the company. Lam had been China.com's president and chief operating officer and was CEO of its Newpalm (China) Information Technology Co. unit. China.com, a subsidiary of CDC Corp., sells multimedia message services and wireless application protocol products.

■ SUMNER LEMON, IDG NEWS SERVICE

Achievo Corp. in Dublin Calif., has agreed to acquire Chinese outsourcing provider Joyo Computer Technology Ltd. for an undisclosed sum. Achievo, also an outsourcing service provider, said the purchase of Guangzhou-based Joyo will help expand its technical resources in China, where it already has operations in Beijing, Shanghai, Dalian and Shenzhen.

Two former presidents of Sanyo Electric Co., Sadao Nagao and Yukinori Nawana, have resigned from the Osaka, Japan-based company's board of directors. Sanyo has been restructuring in the wake of widening losses. Its plans call for cutting Sanyo's workforce by 15%, or 14,400 workers, over the next three years.

ANZ Banking Group Ltd. in Sydney, Australia, has confirmed plans to increase its offshore workforce in India from 650 to 1,000 over the next 18 months. ANZ said the bank plans to shift an undetermined number of IT back-office positions to the Bangalore operation as part of the move.

■ SANDRA ROSSI, COMPUTERWORLD AUSTRALIA

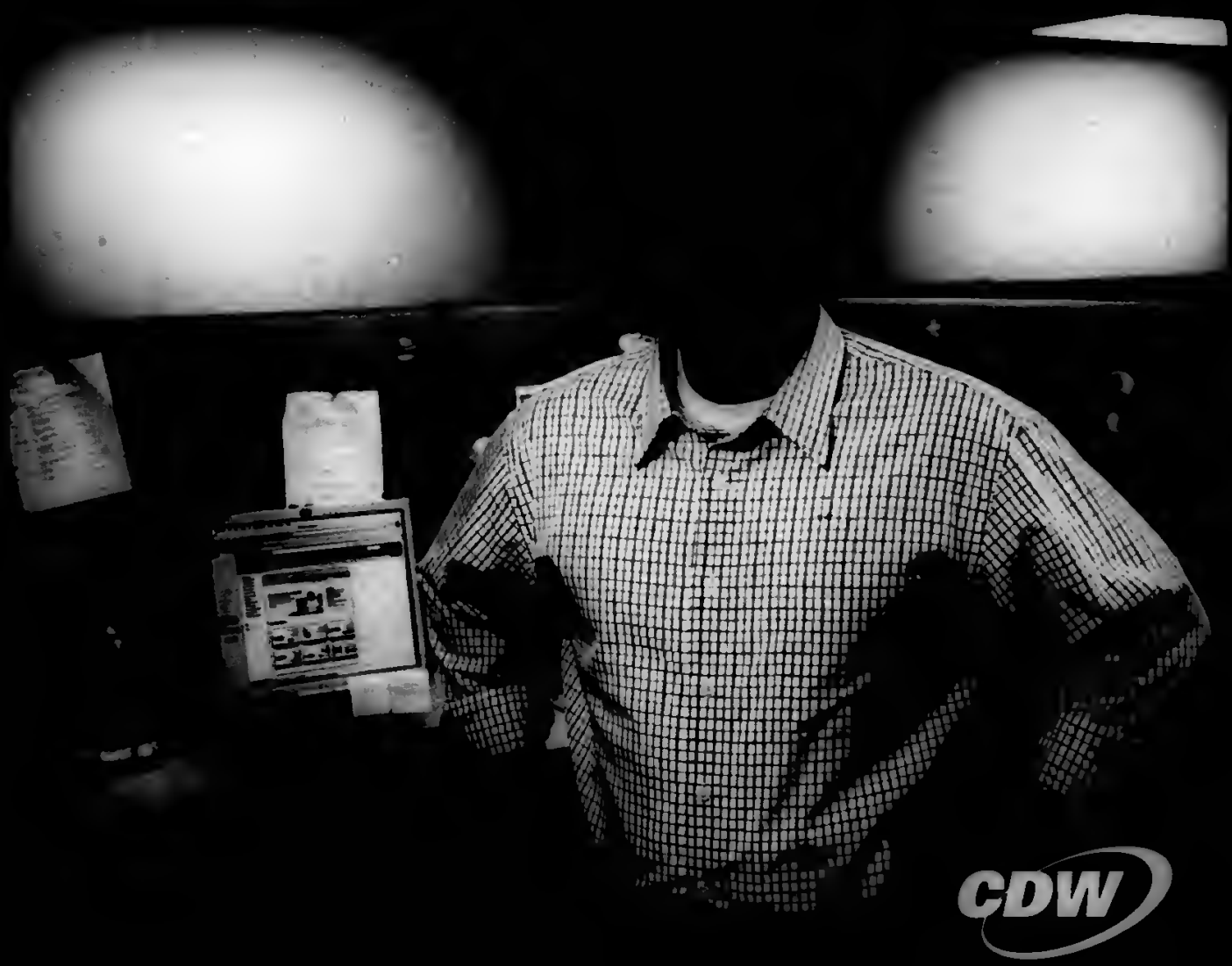
Elitegroup Computer Systems Co., a Taipei, Taiwan-based contract electronics manufacturer, has completed the purchase of Tatung Co.'s desktop computer division. Elitegroup said the NT$6.7 billion ($200 million U.S.) acquisition will increase its manufacturing capacity of notebook and desktop PCs for resellers such as Hewlett-Packard Co. Tatung is also based in Taipei.

■ DAN NYSTEDT, IDG NEWS SERVICE

Page compiled by Mike Bucken.

The security of your entire network is entirely in your hands.

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CDW

Cerf Explains Google's Plan for the Enterprise

Says new information-based tools can help users control corporate data

BY JUAN CARLOS PEREZ

INTERNET PIONEER **Vinton Cerf**, Google Inc.'s chief Internet evangelist, is in the midst of an effort to help his company through several challenges, including its aspirations to penetrate the IT enterprise. Cerf, co-creator of the TCP/IP protocol, talked about Google's plans in a recent interview.

As Google broadens its menu of services beyond search to areas such as blogging, Web mail, Wi-Fi access and instant messaging, does it risk losing its focus? Absolutely not. The focus isn't simply on search. The focus is on making information discoverable and useful, so all of these things you see happening at Google are side effects of expanding on the original paradigm, which was making search an effective tool. Now we're looking at how to make other information activities more effective and relevant.

How important is Google's strategy of gaining enterprise IT business with products like Search Appliance and the Google Mini? The opportunity there is to deliver this capability to a fairly broad range of enterprises, from very small to very large. The ability to help people organize information, especially unstructured information, is a very powerful tool — and our ability to package that up and deliver it to an enterprise is going to be very well received. It takes what we learned in the general Web space and allows us to apply it to corporate information.

How will Google diversify its revenue sources beyond paid search advertising? It is always a good idea to understand how dependent you are on your revenue streams and whether there could be more diversification.

However, we have a very long way to go before we have exhausted that segment of [the overall advertising market] that we have reasonable access to. I'm not suggesting complacency at all, but I'm suggesting we have some ways to grow in our current business model on a global scale before diversification becomes an issue.

As Google grows, can it continue to innovate as it competes with both large competitors and start-ups? You won't find Google resting on any of its laurels and letting the grass grow. Our job is to stay alert to new opportunities and new ideas, not just in the search space, but in the more general space of handling information.



We'll continue to hire the best and brightest people we can. We'll give them freedom to explore and interact with each other, and we hope we can maintain an atmosphere that is comparable to the kind of atmosphere you see in small start-ups.

If we can stay, as we have been, a company of start-ups, I think we'll be able to compete quite effectively.

Since early last year, Google has been involved in a stream of controversies, such as The Authors Guild's recent lawsuit claiming that Google Print Library infringes on patents. How is Google handling such disputes? Part of my job is to try to make that better. On the Google [Book Search controversy], I don't think we explained as carefully as we should have how this was going to work and how we would protect the interest of the publishers. And the publishers have leapt to a conclusion that is not supported by what we're trying to do.

Part of my job is to articulate that more carefully, and I hope we can overcome the concerns that have been expressed.

In general, Google will face these kinds of issues in the future. We're dealing with an enormous quantity of information. Anytime you're dealing with information that is provided by people or is about people, you're going to encounter some controversy. We need to learn how to cope with that more effectively.

Perez is a reporter for the IDG News Service.

IT Detective Work Helps End WAN Slowdown for Construction Firm

Management app finds that Internet radio is the culprit

BY MATT HAMBLEN

When users at Perini Corp. complained early this year about slow performance when using critical hosted project management software, IT managers scratched their heads and undertook a little detective work.

"Truthfully, when people say the Internet is slow, you have no idea what's going on," Kim Holden, IT director at the Framingham, Mass.-based global construction company, said last week. "There are a lot of finger-pointing exercises."

More than 250 workers at Perini's corporate headquarters use Primavera Systems Inc.'s Expedition project management software. It is hosted by LoadSpring Solutions Inc., an application service provider in Lawrence, Mass., on servers accessed over T1 links in a WAN.

"With third-party hosting, you're never sure if the problem is on their end, so you have to eliminate some of the causes and make sure you're not just shooting in the dark," Holden said. Expedition, widely used in the construction industry, wasn't considered the culprit.

To find and fix the problem, Perini's small IT staff first looked at using intrusion-detection software and then eyed packet shaping to improve network performance. The staff decided instead to use traffic management software, choosing Converted Traffic Manager (CTM) from Converged Access Inc. in Billerica, Mass.

Holden said the CTM software can create traffic categories based on business priorities, a key requirement for her group.

Setting Priorities

The software, installed in August for less than $10,000, prioritizes WAN traffic based on Perini's list of the most critical traffic streams, Holden said. E-mail and voice over IP (VoIP) between Framingham and other Perini offices around the world were judged to be the highest priority. FTP traffic was given a medium to low priority, and the lowest priority was given to user access to Internet radio sites, she said.

> **"We discovered people were listening to radio online more than I thought, and that was taking most of the traffic."**
>
> KIM HOLDEN, IT DIRECTOR, PERINI CORP.

"We discovered people were listening to radio online more than I thought, and that was taking most of the traffic," Holden said.

Once Internet radio traffic was relegated to the lowest priority, its performance dropped, as did the number of people listening to it.

"I didn't have to slap anybody's hands and say, 'No, you can't listen to Internet radio,'" Holden said. In fact, users simply stopped using Internet radio when performance lagged.

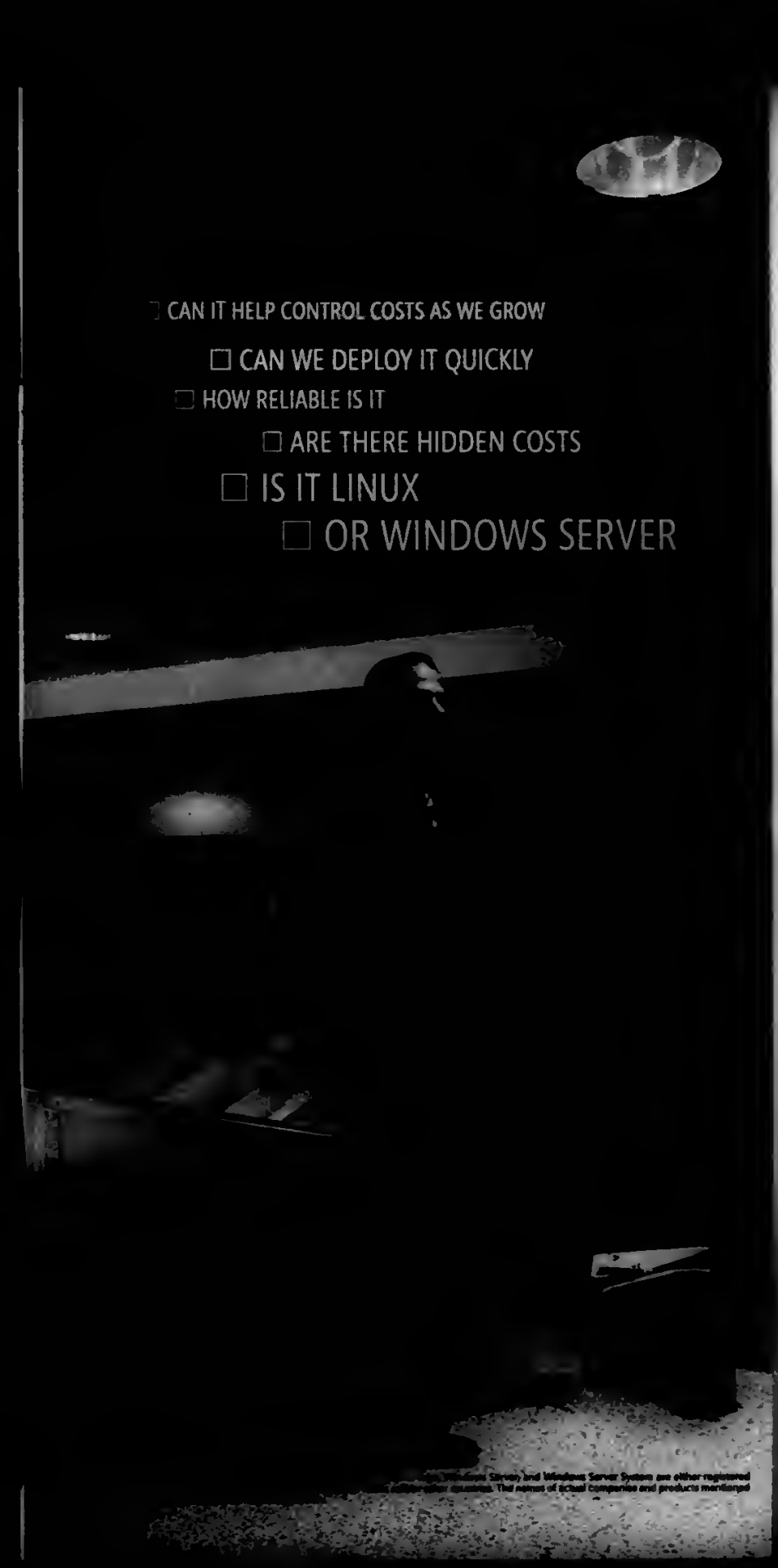
"We haven't heard a 'boo' from anybody since CTM was put in place," Holden said, noting that her staff no longer must spend significant time logging complaints into the project management software.

Perini is considering using other Converged Access products next year to compress VoIP traffic between global offices, especially in Iraq, Afghanistan and several U.S. locations, she said.

The market for WAN traffic management is growing, since customers can see sizable results from a relatively small investment, said Matthias Machowinski, an analyst at Infonetics Inc. in Campbell, Calif.

The market for such products is small compared with the overall routing market and is currently valued in the "low hundreds" of millions of dollars annually, he said.

Other companies offering such tools include Packeteer Inc., Allot Communications Inc., Expand Networks Inc., Peribit Networks Inc., which was recently purchased by Juniper Networks Inc., and Swan Labs Corp., which was recently purchased by F5 Networks Inc.



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RSA

Oracle Applications User Group Adds Four PeopleSoft Organizations to Roster

But still trails Quest in sign-up efforts

BY MARC L. SONGINI

As Oracle Corp.'s acquisition of PeopleSoft Inc. nears the one-year mark, some PeopleSoft user groups are starting to link up with the Oracle Applications User Group.

The OAUG, an independent group based in Atlanta, said late last month that four of the many PeopleSoft user groups have joined it in recent months.

Elizabeth Stephens, chairwoman of one of those groups, PeopleSoft Credit & Accounts Receivable Experts, said linking up with the OAUG was a "no-brainer. We're all part of Oracle now."

Stephens is a senior business analyst at Reed Business Information, which uses the PeopleSoft 8.9 financial application.

Patricia Dues, president of the OAUG, said in a statement yesterday that her organization "is focused on integrating new user groups into the Oracle family."

Dues, a project officer in the Las Vegas city manager's office, said the OAUG continues to reach out to PeopleSoft groups.

At the time Oracle bought PeopleSoft nearly a year ago, PeopleSoft was helping to fund about 170 loosely affiliated user groups. Most of those groups were managed by PeopleSoft's International Customer Advisory Board (ICAB).

The PeopleSoft CRM User Group last month became the latest organization to join the OAUG. Others that have linked up with the OAUG in recent months include the PeopleSoft Healthcare Industry User Group and the PeopleSoft Accounts Payable user group.

Meanwhile, the OAUG in September formed the Oracle Retail Users Group for the customers Oracle inherited when it bought Retek Inc., a maker of software for retailers.

Input Into Fusion

The OAUG said the moves will give the groups input into the development of Project Fusion, Oracle's effort to create a set of best-of-breed applications based on products from the companies it has acquired.

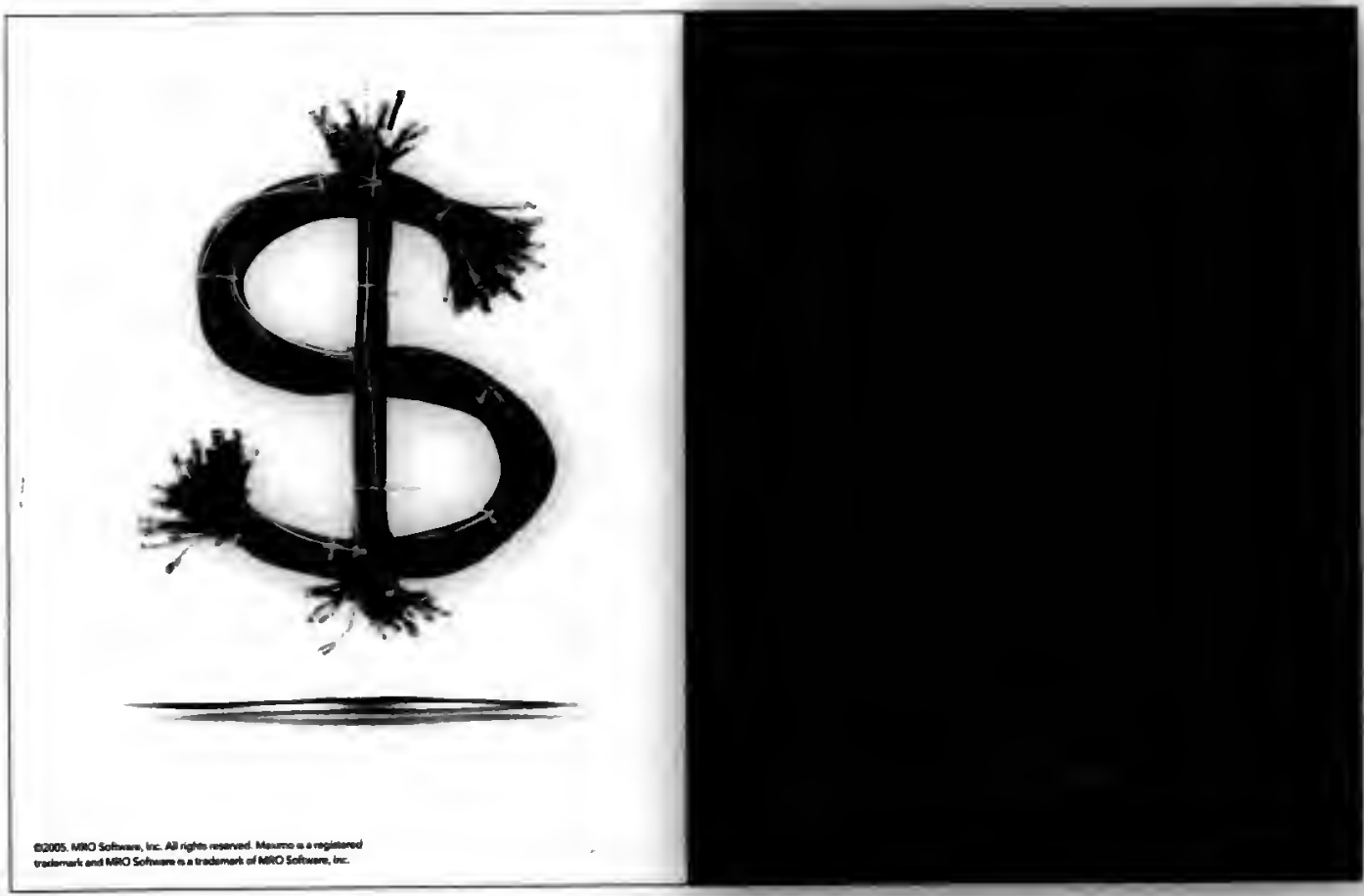
The 15-year-old OAUG can provide PeopleSoft users with a process for direct communication with Oracle officials on matters such as product development and pricing, said Steven Hughes, the organization's executive director.

Though the OAUG is having some success in signing up PeopleSoft user groups, Hughes estimated that there are still some 125 groups that remain independent. They are established on the basis of product, region or industry.

The OAUG isn't the only Oracle user group reaching out to PeopleSoft customers.

The Lexington, Ky.-based Quest International Users Group, which represents users of the J.D. Edwards ERP software now owned by Oracle, announced in June that it would work with ICAB to sign up members.

At the time, ICAB officials made clear that its affiliates were also free to join the OAUG. Some 60 of the groups have so far affiliated with Quest, said John Matelski, a board member.



DON TENNANT

Bold Decisions

LAST week, *Computerworld* reporter Marc L. Songini brought to my attention an excellent two-part article by Michael Massing on the sorry state of news reporting in the U.S. Massing's piece, which appeared in *The New York Review of Books* (*www.nybooks.com*), faults print and broadcast news organizations for a lot of things, but especially for their timidity.



"Today's political pressures too often breed in journalists a tendency toward self-censorship," Massing writes, "toward shying away from the pursuit of truths that might prove unpopular, whether with official authorities or the public." He's particularly critical of the U.S. media's poor record on international coverage. "After September 11, there was much talk about how the networks had to recover their traditional mission and educate Americans about the rest of the world," Massing notes, "yet one need only watch the evening news for a night or two to see how absurd were such expectations."

Indeed, covering unpopular topics is risky for any media outlet, and few topics in IT are more unpopular than offshore outsourcing. So I have little doubt that our feature "Working Through the Pain" in this week's issue (page 46) will ignite another anti-offshore firestorm. After all, the story by Patrick Thibodeau and Thomas Hoffman is all about "learning how to get better results offshore." That means a lot of ire will be directed at our newsroom for "selling out" the IT profession we're here to serve.

Many will argue that we should stop greasing the skids — that we should restrict coverage of corporate best practices or lessons learned by companies engaged in offshore outsourcing. Otherwise, they reason, we're nothing more than accomplices in the effort to export U.S. jobs.

The truth of the matter, unpopular as it may be, is that offshore outsourcing is an economic fact of life. You can disagree with it, you can resent it, you can fester over it. But you can't fight it any more than you can fight getting older. Corporate America must have the offshore outsourcing option in order to be competitive, and it has to be competitive if it's going to sign the paychecks of U.S. workers. Further, IT decision-makers need to learn from the experiences of their peers so they can make their own businesses successful. Facilitating that sharing of experiences is why we in this newsroom do what we do. So when we present an offshore outsourcing "how-to," we do so with no apology.

We also do so with the conviction that it is incumbent upon those same IT decision-makers to find answers to the difficult questions that arise when loyal IT workers stand to be displaced. Finding the answers requires a willingness to invest in the requisite training programs that will afford those workers the opportunity to gain the IT skills that are in highest demand.

Identifying those skills requires some legwork, but it can be done. According to an October report from research firm Foote Partners on hot IT jobs and skills in the third quarter of 2005, the hottest skills were in areas such as security, extreme programming, VoIP and storage-area networking. More important are the nontechnical skills that Foote Partners predicts will be the most highly prized in the next 12 months. Topping that list: project management — especially, interestingly enough, *global* project management.

Let's hope the IT profession does a better job of making the bold decisions our global reality demands than the journalism profession has done. Timidity has no place in either field.

Don Tennant



LETTER TO THE EDITOR IN CHIEF

Look Past the Acronyms and Marketing

CA's Mark Barrenechea writes in response to Don Tennant's Nov. 28 editorial, "Dear John," an open letter to CA CEO John Swainson.

YIKES! YOU were pretty tough on CA's EITM (Enterprise IT Management) vision last week. But CA is delivering something of significant value here for *Computerworld*'s readers, so I'd like to submit a few ideas for your — and their — consideration.

CA RESPONDS

First, we know that IT organizations already devote a significant amount of their time and resources to enterprise management. We've talked to a lot of customers and wouldn't be a leading vendor of enterprise management solutions if we weren't in touch with what goes on in the trenches. In fact, we know that IT organizations spend too much time and money managing and securing their environments instead of investing in innovations that return business value. That's why we're delivering solutions that streamline operations and help ensure that technology investments are well aligned with business imperatives. The best way to do this is with integrated suites of software, not dozens of nonintegrated point solutions.

Second, the challenges IT organizations face are more complex than ever before. It's always been difficult to get an end-to-end view of the application delivery chain across an infrastructure comprising servers, networks, storage resources and software components — each of which is typically instrumented with different management tools. But as IT organizations have piled up successive generations of technology, the challenge of enterprise management has become even greater. In fact, it has now reached a tipping point where the challenge of managing any new generation of technology has become a major inhibiting factor to adopting it.

A more holistic and simpler approach to managing multiple generations and categories of technology is essential not only for maintaining service levels and reducing total cost of technology ownership, but also as a critical enabler of IT innovation. In other words, if you're struggling to manage what you already have, you're probably disinclined to add more to the mix.

So EITM is strategically important to *Computerworld* readers seeking to achieve competitive differentiation by allocating resources where they will generate maximum value. Or, to put it bluntly, this isn't your father's Unicenter. Criticizing CA for unveiling EITM is a little like criticizing Apple for introducing the iPod. People had already been listening to music for years, but something new was happening in the market — and Apple responded, just as CA is responding to its core market.

I suggest that you look past the acronyms and marketing and examine the actual solutions CA is delivering. CA understands the management needs of today's IT organizations better than anyone. We have a clear vision for their future. And, with the 26 EITM-enabled solutions we unveiled at CA World, we are delivering on that vision.

In addition, while we appreciate your concern about CA backsliding when it comes to customer-centricity, nothing could be further from the truth. Again, you criticized the "message" CA is sending by restructuring its customer care processes. We're more focused on the actual quality of the support and service we deliver. We can assure you, this restructuring will substantively benefit our customers and give CA even greater visibility into the evolving needs of the market.

Mark Barrenechea
Executive vice president of technology strategy, CA, Islandia, N.Y.

DAVID MOSCHELLA

IT Moving Into Its Latest Up Cycle

YOU DON'T have to be a weatherman to detect a touch of froth in the air. For the first time in more than five years, the IT industry press is pretty much all positive, with the eyes of the Internet world focused on the future. There is even talk about IT being "disruptive" again. Has a new up cycle begun, perhaps even a mini-bubble? It would seem so.



Remember after the bubble burst how people predicted the demise of Amazon, Yahoo and all the other online-only ventures? Obviously, this hasn't happened. More often than not, the major dot-coms have routed their brick-and-mortar competitors, and their ranks have continued to grow. Apple's iTunes came out of nowhere to transform the music industry, Google is generating bubblelike fortunes, and tiny Skype has shown just how vulnerable the telephone business really is. In Silicon Valley, the venture capitalists are once again touting the giants of tomorrow, and another hiring frenzy has begun.

Symbolically, Bill Gates has written another one of his famous "leaked" memos. If you haven't seen either Gates' recent e-mail or the much longer one by Microsoft CTO Ray Ozzie, they lay out three major new threats/opportunities for Microsoft: the emergence of the Web as a platform (what's generally known as Web 2.0), the power of advertising-based IT business models not just for consumers but for the enterprise, and the many strengths of providing software as a service. Taken together, these trends constitute a more serious challenge to Microsoft than Netscape once did.

People always forget just how cyclical the IT industry really is. Looking back over just the past 25 years, there have been four peaks and valleys. There was the five-year boom that corresponded with IBM's last heyday from 1981 to 1986, followed by a five-year trough until 1992 as U.S. companies felt the pressure from Japan. Then came the long Internet-driven boom and eventual burst of the bubble in 2000 when the perceived false alarms of Y2k, the excessive hype of the dot-com craze and the shock of 9/11 put the brakes on technology spending and shortened business horizons. This downturn now seems to be over.

Someday, historians might well conclude that the nadir of this last down cycle was the publication of Nick Carr's controversial article "IT Doesn't Matter" in the *Harvard Business Review* in the spring of 2003. Could you imagine such a piece being written in, say, 1998? While the article was never persuasive, it captured the spirit of its time, expressing a pessimism as excessive as the bubble itself. Indeed, Carr's article can be seen as an insult gone too far, and since then, the prospects for the IT business have been steadily improving.

History suggests that such up cycles tend to last at least five years, and thus a powerful period of progress may well lie ahead. I have been arguing for some time that the next 10 years in the IT business will have more impact on business and society than the previous 10. When you consider that 10 years ago there was little e-mail, almost no e-commerce and very limited mobility, this is not an insignificant statement. But as the power of the Web becomes ever more apparent, one can once again make such statements without getting laughed out of the room. Just don't mention the phrase "new economy." That was always a loser. ♦

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www.computerworld.com/columns

READERS' LETTERS

H-1B Visa Limit Doesn't Need Expansion

IT'S TIME to call the industry's bluff on the so-called shortage of IT professional jobs in the U.S. As a price for doubling the H-1B limit, a system should be set up in which a registry of qualified and jobless IT professionals is maintained. For each entry on the jobless registry, the H-1B limit would be reduced. Thus, industry will have to put up or shut up.

Louis A. Carliner
Spring Hill, Fla.

I AND MANY others were laid off because a Texas company outsourced our jobs to India, Poland and China, and now our government wishes to pour salt into our wounds by increasing the H-1B limit ["Senate Panel Votes to Boost H-1B Visa Limit by 30,000," Oct. 21, *Computerworld.com*]. For some of us, the job search has been difficult. It's not because we are not qualified, but that we are too old, made too much money, are overqualified and had front-line technology jobs that would, in prospective employers' eyes, leave us prone to boredom with their mundane offerings. Many of my fellow workers have taken positions outside of the technology area for as little as a quarter of what they used to be paid

Ronn Williams
Dallas

I WOULD LIKE to introduce your readers to my "Bell Initiative" aimed at improving H-1B hiring practices. The core idea is a mandatory certification of foreign nonimmigrant IT workers (H-1B visa holders and the like). Since I introduced it in 2003, I have updated and revised it with several additional provisions. You can read the entire initiative at *http://alexanderbell.us/Initiative/IT.htm*, but the following are the core ideas:

- Develop a unified certificate of IT professional and a corresponding curriculum with an objective and comprehensive coverage of modern technology and newer technology trends as they emerge.
- Implement mandatory certification of foreign nonimmigrant IT workers in a process similar to what's now done for medical doctors.

Alexander Bell
President and CEO, Infosoft International Inc., New York

TreasuryDirect System Not Secure

THE FEDS are being somewhat hypocritical in imposing stricter user authentication standards on everyone else while failing to do so in their own massive TreasuryDirect system (*www.TreasuryDirect.gov*) ["Banks Get New Online Authentication Guidelines," Oct. 20, *Computerworld.com*]. TreasuryDirect allows access to user accounts with only an account number and taxpayer identification number, two pieces of information that are used without change for decades and that may be available to hundreds of people, from family members and snoopy household workers to accountants and their employees and janitors, IRS employees and mail thieves. Considering the amount of money involved with each TreasuryDirect account, I wouldn't be surprised to hear that some person had managed to accumulate numerous valid account number/taxpayer ID pairs to steal a massive amount of money.

Michael W. Schuradek
Attorney and CPA, Santa Ana, Calif.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

For more letters on these and other topics, go to
www.computerworld.com/letters

DON TENNANT

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The truth of the matter, unpopular as it may be, is that offshore outsourcing is an economic fact of life. You can disagree with it, you can resent it, you can fester over it. But you can't fight it any more than you can fight getting older. Corporate America must have the offshore outsourcing option in order to be competitive, and it has to be competitive if it's going to sign the paychecks of U.S. workers. Further, IT decision-makers need to learn from the experiences of their peers so they can make their own businesses successful. Facilitating that sharing of experiences is why we in this newsroom do what we do. So when we present an offshore outsourcing "how-to," we do so with no apology.

We also do so with the conviction that it is incumbent upon those same IT decision-makers to find answers to the difficult questions that arise when loyal IT workers stand to be displaced. Finding the answers requires a willingness to invest in the requisite training programs that will afford those workers the opportunity to gain the IT skills that are in highest demand.

Identifying those skills requires some legwork, but it can be done. According to an October report from research firm Foote Partners on hot IT jobs and skills in the third quarter of 2005, the hottest skills were in areas such as security, extreme programming, VoIP and storage-area networking. More important are the nontechnical skills that Foote Partners predicts will be the most highly prized in the next 12 months. Topping that list: project management — especially, interestingly enough, *global* project management.

Let's hope the IT profession does a better job of making the bold decisions our global reality demands than the journalism profession has done. Timidity has no place in either field.

Don Tennant



LETTER TO THE EDITOR IN CHIEF

Look Past the Acronyms and Marketing

CA's Mark Barrenechea writes in response to Don Tennant's Nov. 28 editorial, "Dear John," an open letter to CA CEO John Swainson.

YIKES! YOU were pretty tough on CA's EITM (Enterprise IT Management) vision last week. But CA is delivering something of significant value here for *Computerworld*'s readers, so I'd like to submit a few ideas for your — and their — consideration.

CA RESPONDS

First, we know that IT organizations already devote a significant amount of their time and resources to enterprise management. We've talked to a lot of customers and wouldn't be a leading vendor of enterprise management solutions if we weren't in touch with what goes on in the trenches. In fact, we know that IT organizations spend too much time and money managing and securing their environments instead of investing in innovations that return business value. That's why we're delivering solutions that streamline operations and help ensure that technology investments are well aligned with business imperatives. The best way to do this is with integrated suites of software, not dozens of nonintegrated point solutions.

Second, the challenges IT organizations face are more complex than ever before. It's always been difficult to get an end-to-end view of the application delivery chain across an infrastructure comprising servers, networks, storage resources and software components — each of which is typically instrumented with different management tools. But as IT organizations have piled up successive generations of technology, the challenge of enterprise management has become even greater. In fact, it has now reached a tipping point where the challenge of managing any new generation of technology has become a major inhibiting factor to adopting it.

A more holistic and simpler approach to managing multiple generations and categories of technology is essential not only for maintaining service levels and reducing total cost of technology ownership, but also as a critical enabler of IT innovation. In other words, if you're struggling to manage what you already have, you're probably disinclined to add more to the mix.

So EITM is strategically important to *Computerworld* readers seeking to achieve competitive differentiation by allocating resources where they will generate maximum value. Or, to put it bluntly, this isn't your father's Unicenter. Criticizing CA for unveiling EITM is a little like criticizing Apple for introducing the iPod. People had already been listening to music for years, but something new was happening in the market — and Apple responded, just as CA is responding to its core market.

I suggest that you look past the acronyms and marketing and examine the actual solutions CA is delivering. CA understands the management needs of today's IT organizations better than anyone. We have a clear vision for their future. And, with the 26 EITM-enabled solutions we unveiled at CA World, we are delivering on that vision.

In addition, while we appreciate your concern about CA backsliding when it comes to customer-centricity, nothing could be further from the truth. Again, you criticized the "message" CA is sending by restructuring its customer care processes. We're more focused on the actual quality of the support and service we deliver. We can assure you, this restructuring will substantively benefit our customers and give CA even greater visibility into the evolving needs of the market.

Mark Barrenechea
Executive vice president of technology strategy, CA, Islandia, N.Y.

DAVID MOSCHELLA

IT Moving Into Its Latest Up Cycle

YOU DON'T have to be a weatherman to detect a touch of froth in the air. For the first time in more than five years, the IT industry press is pretty much all positive, with the eyes of the Internet world focused on the future. There is even talk about IT being "disruptive" again. Has a new up cycle begun, perhaps even a mini-bubble? It would seem so.



DAVID MOSCHELLA is global research director at the Leading Edge Forum, a Computer Sciences Corp company. Contact him at [redacted]

Remember after the bubble burst how people predicted the demise of Amazon, Yahoo and all the other online-only ventures? Obviously, this hasn't happened. More often than not, the major dot-coms have routed their brick-and-mortar competitors, and their ranks have continued to grow. Apple's iTunes came out of nowhere to transform the music industry. Google is generating bubblelike fortunes, and tiny Skype has shown just how vulnerable the telephone business really is. In Silicon Valley, the venture capitalists are once again touting the giants of tomorrow, and another hiring frenzy has begun.

Symbolically, Bill Gates has written another one of his famous "leaked" memos. If you haven't seen either Gates' recent e-mail or the much longer one by Microsoft CTO Ray Ozzie, they lay out three major new threats/opportunities for Microsoft: the emergence of the Web as a platform (what's generally known as Web 2.0), the power of advertising-based IT business models not just for consumers but for the enterprise, and the many strengths of providing software as a service. Taken together, these trends constitute a more serious challenge to Microsoft than Netscape once did.

People always forget just how cyclical the IT industry really is. Looking back over just the past 25 years, there have been four peaks and valleys. There was the five-year boom that corresponded with IBM's last heyday from 1981 to 1986, followed by a five-year trough until 1992 as U.S. companies felt the pressure from Japan. Then came the long Internet-driven boom and eventual burst of the bubble in 2000 when the perceived false alarms of Y2k, the excessive hype of the dot-com craze and the shock of 9/11 put the brakes on technology spending and shortened business horizons. This downturn now seems to be over.

Someday, historians might well conclude that the nadir of this last down cycle was the publication of Nick Carr's controversial article "IT Doesn't Matter" in the *Harvard Business Review* in the spring of 2003. Could you imagine such a piece being written in, say, 1998? While the article was never persuasive, it captured the spirit of its time, expressing a pessimism as excessive as the bubble itself. Indeed, Carr's article can be seen as an insult gone too far, and since then, the prospects for the IT business have been steadily improving.

History suggests that such up cycles tend to last at least five years, and thus a powerful period of progress may well lie ahead. I have been arguing for some time that the next 10 years in the IT business will have more impact on business and society than the previous 10. When you consider that 10 years ago there was little e-mail, almost no e-commerce and very limited mobility, this is not an insignificant statement. But as the power of the Web becomes ever more apparent, one can once again make such statements without getting laughed out of the room. Just don't mention the phrase "new economy." That was always a loser. ●

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www.computerworld.com/columns

READERS' LETTERS

H-1B Visa Limit Doesn't Need Expansion

IT'S TIME to call the industry's bluff on the so-called shortage of IT professional jobs in the U.S. As a price for doubling the H-1B limit, a system should be set up in which a registry of qualified and jobless IT professionals is maintained. For each entry on the jobless registry, the H-1B limit would be reduced. Thus, industry will have to put up or shut up.
Louis A. Carliner
Spring Hill, Fla.

I AND MANY others were laid off because a Texas company outsourced our jobs to India, Poland and China, and now our government wishes to pour salt into our wounds by increasing the H-1B limit ["Senate Panel Votes to Boost H-1B Visa Limit by 30,000," Oct. 21, *Computerworld.com*]. For some of us, the job search has been difficult. It's not because we are not qualified, but that we are too old, made too much money, are overqualified and had front-line technology jobs that would, in prospective employers' eyes, leave us prone to boredom with their mundane offerings. Many of my fellow workers have taken positions outside of the technology area for as little as a quarter of what they used to be paid.
Ronn Williams
Dallas

I WOULD LIKE to introduce your readers to my "Bell Initiative" aimed at improving H-1B hiring practices. The core idea is a mandatory certification of foreign nonimmigrant IT workers (H-1B visa holders and the like). Since I introduced it in 2003, I have updated and revised it with several additional provisions. You can read the entire initiative at *http://alexanderbell.us/Initiative/IT.htm*, but the following are the core ideas:

- Develop a unified certificate of IT professional and a corresponding curriculum with an objective and comprehensive coverage of modern technology and newer technology trends as they emerge.
- Implement mandatory certification of foreign nonimmigrant IT workers in a process similar to what's now done for medical doctors.

Alexander Bell
President and CEO, Infosoft International Inc., New York

TreasuryDirect System Not Secure

THE FEDS are being somewhat hypocritical in imposing stricter user authentication standards on everyone else while failing to do so in their own massive TreasuryDirect system (*www.TreasuryDirect.gov*) ["Banks Get New Online Authentication Guidelines," Oct. 20, *Computerworld.com*]. TreasuryDirect allows access to user accounts with only an account number and taxpayer identification number, two pieces of information that are used without change for decades and that may be available to hundreds of people, from family members and snoopy household workers to accountants and their employees and janitors, IRS employees and mail thieves. Considering the amount of money involved with each TreasuryDirect account, I wouldn't be surprised to hear that some person had managed to accumulate numerous valid account number/taxpayer ID pairs to steal a massive amount of money.
Michael W. Szkaradek
Attorney and CPA, Santa Ana, Calif.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax (508) 879-4843. E-mail letters@computerworld.com. Include an address and phone number for immediate verification.

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HONORS SHOWCASE

Data From the Heavens

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FUTURE WATCH

Getting Real

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SECURITY MANAGER'S JOURNAL

Deciphering Options For Laptop Encryption

Mathias Thurman and his project team choose a security vendor, taking a big step toward protecting their company's intellectual property. PAGE 38

LAW AND ORDER ON THE OPEN-SOURCE RANGE

Fraught with complexity and risks, licensing is one of the trickiest issues on the open-source software frontier. By Mark Hall



JOHN BOARDS

YEARS AGO, when Charlie Brenner encountered open-source technology, he saw a great opportunity, but he also saw some danger. Free, effective source code was great, but Brenner recognized that there would be added complexity in managing what he calls "the Wild West environment" of open-source licensing, primarily licenses that force you to turn your own private code into open-source if you violate their provisions.

"We don't want to have our proprietary code dragged into the public domain," says the vice president of the Fidelity Center for Applied Technology at Boston-based Fidelity Investments.

Still, Brenner and others argue that the value of open-source tools greatly outweighs the extra hoops the licensing structures force you to jump through. They've learned that you should start jumping through the hoops before coding begins by establishing a written development process when open-source is involved. Next, you should design, code and test applications in ways that let you use open-source tools while complying with the extra layer of licensing complexity.

"People move to the complexity issue too fast," insists Eben Moglen, chairman of the Software Freedom Law Center in New York and a key contributor to the update in progress to the GNU General Public License (GPL), which is said to cover at least 70% of

Best Practices and Questions to Ask Before Using Open-Source

- Consider using tools that determine whether your code includes open-source.
- Will all your software pass an audit during a merger or acquisition?
- Determine how software will be distributed.
- Is there a chance your code will be used by partners, suppliers or customers outside your company?
- Create a remediation process for software that incorrectly includes open-source.
- Do you have a process to handle exceptions?
- Perform code audits.
- Do you have the expertise to identify open-sources in your code?
- Establish a central group to develop corporate policies on acceptable use of open-source code by programmers.
- Do you prefer a service, or would you rather use products inside the firewall?
- Create a list of licenses that are acceptable as a guide for developers to choose open-source projects.
- Are you willing to release your code to the world, or would you rewrite?

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the 100,000-plus open-source projects listed on SourceForce.net.

He argues that the primary objective of open-source licensing is "to protect users' rights."

True, but that protection comes at a price for IT because, like it or not, open-source licensing does add complexity to any application development effort. So much so that some CIOs raise barriers against open-source software. It's one of the major reasons why Robert Urwiler, CIO at Macromedia Inc. in San Francisco, says, "It's an uphill battle for open-source to get in through my door."

Risky Business

WHEN MAJOR TECHNOLOGY vendors smiled upon open-source, even conservative companies gave the software a green light for internal use.

"What helps is that we're a mainframe shop, and when IBM comes in and says open-source is good, it's like the pope blessing it," says John Welch, open systems administrator at Kansas City Life Insurance Co. in Missouri.

But that blessing is not a dispensation from the risks involved, says Daniel Egger, CEO of Open Source Risk Management Inc. in New York. "Forces that are hostile to open-source have exaggerated the risk," says Egger. "But it would be false to say the risk is zero."

He says that in some cases, if you're caught distributing open-source code that you've modified or combined with your own, the license can compel you to release all of your related code into the public domain. After Cisco Systems Inc. bought Linksys, it discovered that Linksys had violated the GPL, and it had to unveil what it had hoped would be proprietary code as open-source software.

Egger's firm works with third-party insurers to offer up to $10 million in risk insurance in case your company botches an open-source license restriction. But it will also protect you against a SCO-like attack on open-source. SCO, he points out, has been clumsily trying to sue end users of the Linux operating system for alleged copyright violations. But so far, the company has failed in all of its legal maneuvers.

– MARK HALL

Before letting open-source inside your company, there are a few simple things to know. There are two general types of open-source licenses: permissive and coercive. The first, exemplified by the BSD or MIT licenses, puts no restrictions on whether you distribute the open-source software outside your organization, modify the code or combine it with your code — the three cardinal sins covered by coercive licenses, says Mike Olson, CEO of Sleepycat Software Inc. in Lincoln, Mass. He acknowledges that his own Sleepycat license as well as the GPL on which it was based are good examples of coercive licenses.

To foster and control open-source inside Fidelity, Brenner says he helped put together the Open-Source Support Center (OSSC), an internal team of technologists and attorneys who evaluate open-source projects to ensure that they meet the company's technical and legal standards. The OSSC writes the rules governing Fidelity's use of open-source and publishes a list of acceptable licenses so developers know before they download code whether the license is acceptable.

Still, Brenner doesn't discourage developers from checking out tools whose licenses aren't on the list. He says if the OSSC considers the software a good technical fit, Fidelity will approach the owner of the copyright and negotiate a deal directly. Many of the dozens of licenses listed on the Open Source Initiative Web site (*www.opensource.org*) include a clause suggesting the copyright holder is willing to deal.

For example, Olson says, Sleepycat has signed more than 300 standard commercial licenses with companies because his firm owns all the copyrights to its embedded database software, BerkelyDB. In addition, few people know how many copyright holders there are to parts of Linux, which is covered by the GPL.

Service With a Smile

Despite the trend toward software running as a service, most coercive open-source licenses consider the physical movement of bits from one machine to another to constitute unlicensed distribution. If you design your application to "isolate code segments so that they are calling each other as services," you're likely to be safe, Brenner says. That may change in future revisions to open-source licenses, but for now, Olson agrees that a service-oriented application architecture stays within the letter, if not the spirit, of open-source licensing.

Licensing Do's and Don'ts

There more than 55 open-source licenses listed as "approved" by the Open Source Initiative. All include provisions that the source code is used "as is" and, just like proprietary software, the licenses offer no warranties; plus, they all require you to include the copyright or patent notice of the source code owner. Here are some other provisions:

Apache License 2.0
You must include a prominent notice of all changes that have been made to source code.

BSD
You may distribute modified or combined open-source code with or without including your source code.

GPL
If you modify open-source code or combine it with your own, your code must be made open when you distribute the new code.

Mozilla
If you discover after distribution that a third party claims ownership rights to code, you must take steps to notify all the parties you have distributed code to.

Sleepycat
You must negotiate specific rights with copyright holders.

When you do need to combine your application code with open-source, say, by making library calls to it, the Library GPL (LGPL) is an ideal license, suggests Michael Mullis. He's the chief technology officer at Scientific Games Corp. in New York, which provides lottery software to state governments. The LGPL license permits calling the open-source code from a stored library in your application.

Mullis adds that even if your company has a group like Fidelity's OSSC and you follow stringent best practices and employ zealous technical leads to apply them, you still must audit your code for open-source license transgressions. Your oversight group needs to establish milestones where audits should take place throughout the software cycle.

That central group needs to have real authority, says Diane Peters, general counsel at Open Source Development Labs Inc. in Beaverton, Ore. For example, if you're involved in a project to deliver software tools to your customers or supply chain and the group has concerns about a license obligations, it should have the power to stop the project in its tracks, she says.

Mullis recalls an incident at a prior employer when a contractor, who was not aware of the open-source-use policies, included some free code into an application. Had Mullis not discovered it, his former company would have had to reveal its entire proprietary source code to the world. "It would have been a serious legal problem," he says.

Fingerprints

Not every company is going to have someone with Mullis' expertise, so IT vendors offer tools specifically to detect open-source code buried inside source files. Paul English, CTO at Kayak Software Corp. in Norwalk, Conn., uses a service from Black Duck Software Inc. in Waltham, Mass. Black Duck CEO Douglas Levin claims that his service detects more than 400 instances of open-source code found in projects on SourceForge and elsewhere.

English says it's critical for his business that Kayak pass a code audit because one of his firm's business scenarios involves being acquired. "We have to show due diligence that our code is clear," he says.

Black Duck and its main rival, San Francisco-based Palamida Inc., "fingerprint" your code. According to Ray Waldin, CTO at Palamida, a fingerprint is a unique mathematical token that the services compare against the millions of tokens they have on file. But, he adds, the process involves more than generating a hash (or token) of the code and doing a simple comparison.

Palamida's service also evaluates code behavior — that is, the function of a given code snippet — which can reveal code that's been modified or moved. His service ranks the portions of your code that allegedly contain open-source, identifies the projects involved and then, of course, points you to their licenses.

You don't actually send your source code to Black Duck or Palamida to be scrutinized. They send you a software tool that fingerprints your code by running a multipattern search that detects a source file's coding patterns.

Naturally, you can take a chance that you won't get caught violating an open-source license. But you should know that the Software Freedom Law Center is hiring more lawyers whose job will be to show you the error of your ways.

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DATA FROM THE Heavens

European data-flow system gathers astronomers' observations from 11 countries.

BY MARY K. PRATT

[redacted] is an 11-country intergovernmental organization for astronomical research headquartered in Garching, Germany. It operates astronomical observatories in Chile.

[redacted] consists of about 100 people – a mix of scientists, software engineers, database experts and other technical professionals.

IMAGINE THAT YOUR DATA is as vast as the heavens, with the information as complex as galaxies themselves.

Most organizations would find such imagery dizzying, but for the European Southern Observatory, it's reality. And ESO has it under control.

The organization developed a system to manage data from outer space. Its end-to-end data-flow system is a collection of tools and processes that helps the agency to serve researchers who use its telescopes and archives.

The success of its system has earned ESO recognition from the *Computerworld* Honors program as well as other observatories, whose officials see ESO as a leader in this field.

"It's something that we all acknowledge as being important," says Todd Boroson, deputy director of the National Optical Astronomy Observatory in Tucson, Ariz., and associate director for the NOAO Data Products Program.

ESO officials saw a chance to improve the way researchers collect, use and share data when the agency started to build the Very Large Telescope cluster in Chile more than 10 years ago. In 1995, they created the data management and operations division to move the 11-country ESO toward those goals.

"What we're trying to do is create a system that allows research astronomers to have greater efficiency in conducting their observations and turning that into a science result," says David Silva, head of the data-flow operations department.

The IT team borrowed from advances in data collection made possible by the Hubble Space Telescope as well as relational databases developed in the banking industry. "One of our strengths is we look at the commercial market and try to find solutions that are applicable for us," Silva says.

How It Works

ESO developed a system with several major components. Web-based interfaces provide information and tools to end users — the researchers. These interfaces allow researchers to submit detailed observation requests that ESO workers in Chile can then execute. The system stores 30TB of data.

The main user tool for submitting programs is a Java-based client that runs on the astronomers' desktops and exchanges data with a server located at ESO headquarters. ESO operations staffers use another Java-based tool to manage and execute user programs.

Meanwhile, an enterprise-class relational database management system is used to operate and synchronize the databases in Germany and Chile.

ESO's tech team used a combination of off-the-shelf products and internally developed pieces for areas where customization made the most sense. The system was based primarily on Sun Solaris and Hewlett-Packard Co. technologies, but now the IT team is moving toward Linux running on Dell Inc. hardware. ESO also uses data management products from Sybase Inc., which has database expertise and has worked with other astronomical agencies.

ESO invested about $60 million in the IT infrastructure between 1995 and 2001, according to Peter Quinn, head of ESO's data management and operations division. Most of that investment — nearly $50 million — went to labor costs, with the rest going to equipment. ESO now invests about $12 million annually in development, maintenance and operations.

"They've done a thorough job providing an IT infrastructure to ensure they're using the telescopes in an efficient way," notes Daniel Steeghs, an astronomer at the Harvard-Smithsonian Center for Astrophysics in Cambridge, Mass., and a native of the Netherlands who has worked on ESO's systems.

Despite its successes, ESO has challenges ahead in managing its ever-increasing volume of data. Officials say they're developing cluster computing technology to meet predicted needs: ESO must have the capacity to store and process close to 1TB of science data per day by 2010.



ESO's Peter Quinn accepts a Computerworld Honors award in Washington.

But such challenges haven't stopped others — including those pushing for an international virtual observatory — from following ESO's lead in end-to-end data-flow management.

As Steeghs says, "People have recognized that it's the way to go."

Pratt is a Computerworld *contributing writer.*

CONQUERING CULTURAL RESISTANCE

DESPITE ITS GOVERNMENTAL origins and academic bent, ESO faced a corporatelike problem when implementing its data-flow system six years ago: getting user buy-in.

For centuries, astronomers made their observations using their own telescopes, and even now they often travel alone to remote locations to conduct their studies. Yet the weather can ruin planned observations, leaving scientists who waited months or years for a brief turn at a shared telescope empty-handed. In addition, astronomers are unlikely to share the data they do capture on those powerful telescopes.

ESO wanted to address those problems, so officials asked researchers to use the data-flow system when they conduct observations. Researchers submit their observation plans in advance, and computers sort them and put them in a queue based on factors such as the weather conditions at the site of the Chilean telescopes. Observations are sent back via the Internet or hard disk, with data stored for general use after one year of proprietary use.

"We had to win people over, but it didn't take long," says Peter Quinn, head of ESO's data management and operations division.

ESO established a user support department early on to ensure that clients get the service they need. Meanwhile, ESO's IT staff collected requirements from users and converted those ideas into tools, says Michèle Peron, head of the data-flow system department.

Still, there were some bumps, says David Silva, who heads the data-flow operations department. "In the beginning, people hated us," he says, adding that researchers complained in letters to the director general.

Instead of becoming defensive, the IT team worked out problems.

"As with all new things, there is a learning curve, and the first few times, it was difficult," says Frank Grundahl, a researcher at the University of Aarhus in Denmark who uses the system. "However, the very clear structure that has been set up, including the extensive documentation, now makes things very efficient."

– MARY K. PRATT

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The IT team borrowed from advances in data collection made possible by the Hubble Space Telescope as well as relational databases developed in the banking industry. "One of our strengths is we look at the commercial market and try to find solutions that are applicable for us," Silva says.

How It Works

ESO developed a system with several major components. Web-based interfaces provide information and tools to end users — the researchers. These interfaces allow researchers to submit detailed observation requests that ESO workers in Chile can then execute. The system stores 30TB of data.

The main user tool for submitting programs is a Java-based client that runs on the astronomers' desktops and exchanges data with a server located at ESO headquarters. ESO operations staffers use another Java-based tool to manage and execute user programs.

Meanwhile, an enterprise-class relational database management system is used to operate and synchronize the databases in Germany and Chile.

ESO's tech team used a combination of off-the-shelf products and internally developed pieces for areas where customization made the most sense. The system was based primarily on Sun Solaris and Hewlett-Packard Co. technologies, but now the IT team is moving toward Linux running on Dell Inc. hardware. ESO also uses data management products from Sybase Inc., which has database expertise and has worked with other astronomical agencies.

ESO invested about $60 million in the IT infrastructure between 1995 and 2001, according to Peter Quinn, head of ESO's data management and operations division. Most of that investment — nearly $50 million — went to labor costs, with the rest going to equipment. ESO now invests about $12 million annually in development, maintenance and operations.

"They've done a thorough job providing an IT infrastructure to ensure they're using the telescopes in an efficient way," notes Daniel Steeghs, an astronomer at the Harvard-Smithsonian Center for Astrophysics in Cambridge, Mass., and a native of the Netherlands who has worked on ESO's systems.

Despite its successes, ESO has challenges ahead in managing its ever-increasing volume of data. Officials say they're developing cluster computing technology to meet predicted needs; ESO must have the capacity to store and process close to 1TB of science data per day by 2010.

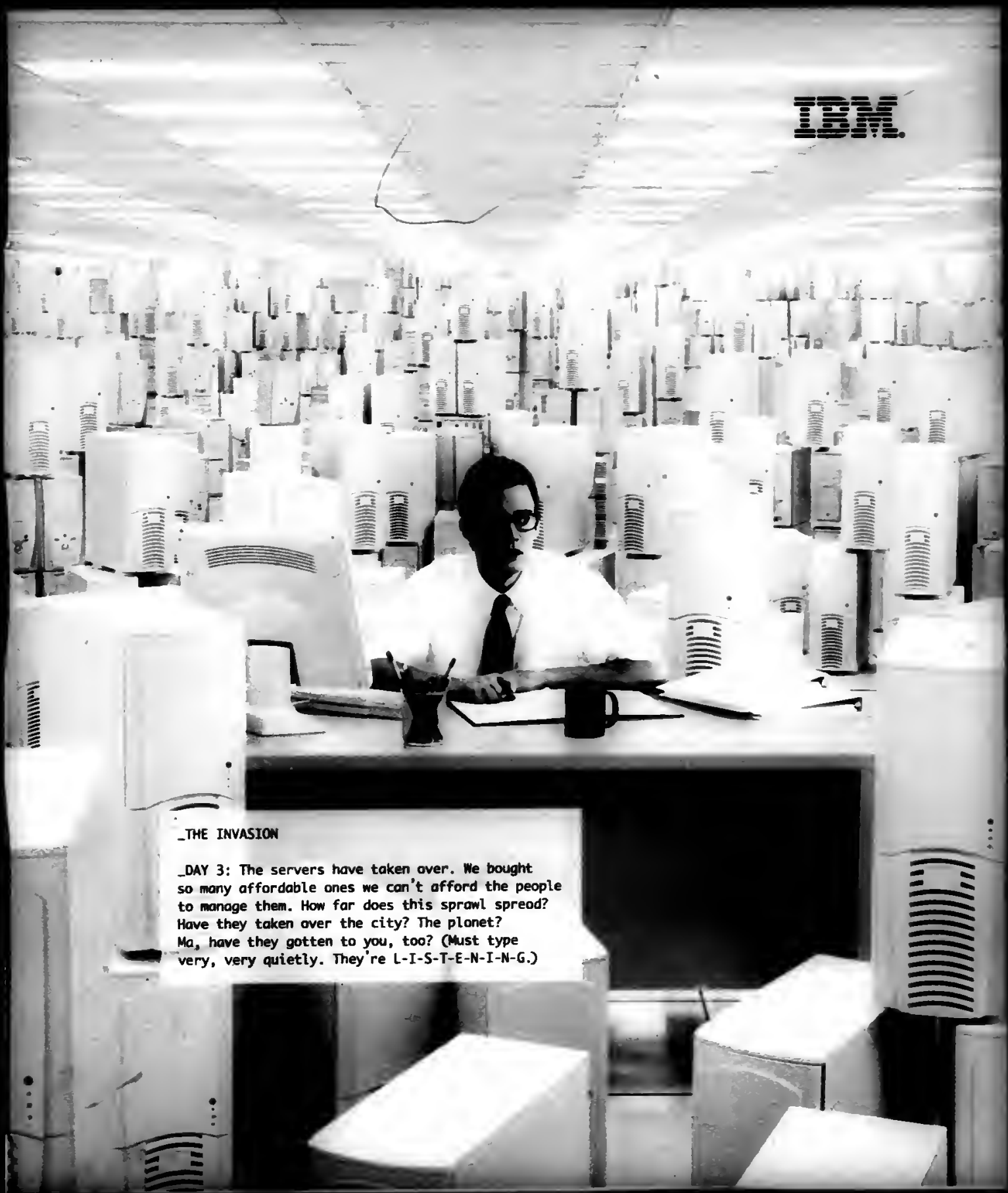


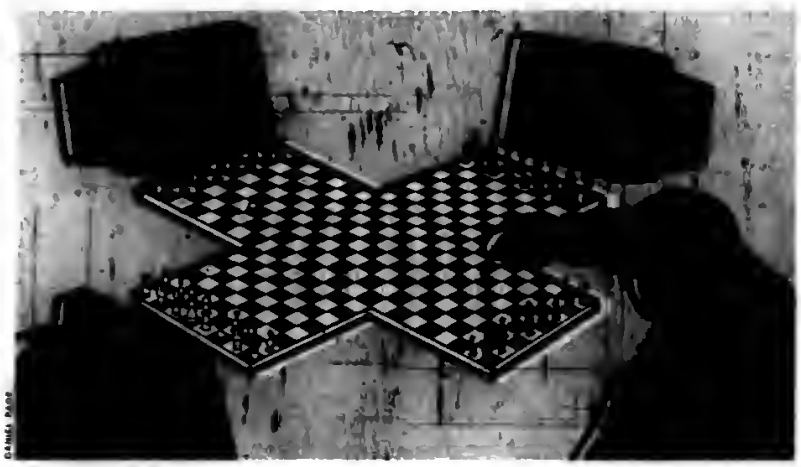
But such challenges haven't stopped others — including those pushing for an international virtual observatory — from following ESO's lead in end-to-end data-flow management.

As Steeghs says, "People have recognized that it's the way to go." ▸

Pratt is a Computerworld contributing writer.




IBM
_THE INVASION
_DAY 3: The servers have taken over. We bought so many affordable ones we can't afford the people to manage them. How far does this sprawl spread? Have they taken over the city? The planet? Ma, have they gotten to you, too? (Must type very, very quietly. They're L-I-S-T-E-N-I-N-G.)



DANIEL BASE

Getting REAL

Researchers find ways to tame the complexity in real-world reasoning. By Gary Anthes

IT IS surely one of the more mind-blowing PowerPoint slides ever created. It's a graph, and one of the *smallest* numbers, near the bottom of the vertical axis, is 10^{40}, the number of seconds from now until the sun burns up. Then comes 10^{47}, the number of atoms on Earth. After that, the numbers get really big, topping the scale at $10^{301,030}$.

This graph, from the Defense Advanced Research Projects Agency, shows the exponential growth in possible outcomes for a range of activities, from a simple car engine diagnosis with 100 variables to war gaming with 1 million variables (that's what the $10^{301,030}$ represents).

The point DARPA is trying to make in explaining its Real-World Reasoning Project is that computers will never be able to exhaustively examine the possible outcomes of complex activities, any more than a roomful of monkeys with typewriters would ever be able to re-create the works of Shakespeare.

But in the recently completed Phase I of the Real Project, as it's called, the agency did discover shortcuts that can tame the punishing combinatorial complexity that for decades has stymied efforts to model the real world.

Beyond Brute Force

Bart Selman, a computer science professor at Cornell University and one of three DARPA contractors on the project, points out that for a decade there have been automated reasoning tools that can discover defects in chip or software designs. These tools can "prove" the correctness of a specification without exhaustively testing every situation the chip or software might encounter.

But those tools can do only what's called single-agent reasoning. Selman is extending the concepts to a much harder class of problem — multiagent scenarios in which there's one or more opposing forces — and he's developed chess-playing software to test his ideas. The best chess programs today, such as IBM's Deep Blue, excel by brute-force trials of moves, analyzing millions of board positions per second. "Deep Blue explores hundreds of millions of strategies, but most of them are very dumb," Selman says. "Grandmasters only explore three or four possible lines of play."

The Cornell chess program works more like a grandmaster, he says. "It might exploit certain strategies, then find they are not successful. It learns from that and adds that to its knowledge base. It gets better the more games it plays, even during a single game," Selman explains. It develops a conceptual view of the board and seeks out overall positions that will give it strength. By applying these learning techniques and other improvements over traditional reasoning tools, Selman's team has so far achieved a 10^9 speed improvement over those tools, he says.

While Selman works on two-agent systems like chess, researchers at SRI International in Menlo, Park, Calif., are looking at games with four or more agents. That lets them include the dynamics of partnerships and coalitions often found in real-world conflicts.

FUTURE WATCH

Patrick Lincoln, director of the nonprofit's Computer Science Laboratory, has applied a "model checker" that's normally used to prove out semiconductor designs to a four-player variant of chess and to Diplomacy, a seven-player board game set in Europe just before World War I. Lincoln developed an algorithm that can find the "Nash equilibrium" in a game, a point at which no player can deviate from his strategy without harming his outcome. Once that's been determined and the strategies of all the players are known, the model checker can find the best tactical moves given the various partnerships that have evolved. "This is a major computational challenge," Lincoln concedes.

Like Selman at Cornell, Lincoln has used model-checking techniques to mathematically prune the combinatorial tree. "We are doing it symbolically, in a way we don't have to exhaustively look at all the cases," he says.

Meanwhile, researchers at the University of California, Berkeley, are introducing notions of uncertainty into automated reasoning. They are modeling Kriegspiel chess, a variant of the game that the Prussian army used in the 19th century to train its officers. In Kriegspiel chess, neither opponent sees the pieces or the moves of the other, so each works only with information that's been inferred from the consequences of his own moves.

Stuart Russell, a computer science professor at Berkeley, says his team has come up with search algorithms that are 100 to 1,000 times faster than earlier methods for this kind of problem. Some can find solutions directly, without trying all possibilities. He says his techniques could one day be used in applications dealing with real-world situations whose dynamics are only partially observable, such as negotiations, management of traffic flows or supply distribution systems.

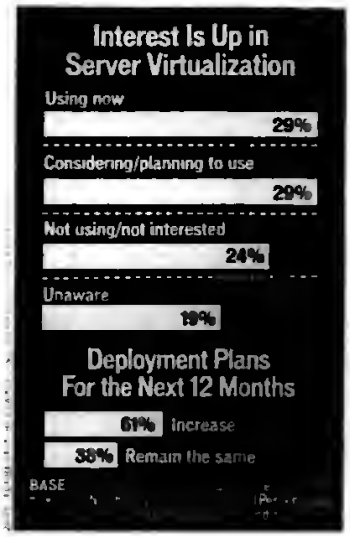
"With these technologies, one might create a logistics decision-support system that could, for instance, consider the likelihood of future events such as a natural disaster, and factor the event, and its implications, into the logistics process," says Tom Wagner, DARPA's program manager for the Real Project. "That same logistics system could also reason about the value of forming a relationship with another company, possibly even a competitor, as a way to improve the response to that disaster."

In the next phase of the project, not yet approved by DARPA, SRI will scale up the tools to handle more complex games with more players, Lincoln says. "The exponentials are so terrifying," he says. "The only way to make progress is to tame them algorithmically."


IBM.
_DAY 30: It's gatten worse. I'm trapped in a maze af aur own creatian. Oh, the irany. I need an answer. (P.S. I'm frightened.)
_DAY 31: I need IBM Systems with virtualizatian technology. Helps you manage your servers and storage, each from a single view, so you can deplay resources an the fly. Lets yau scale up and out quickly. I will achieve control. I will be a big hera. They will call me Ned. Ned, Champion af Simplicity.

Geek's

A STROLL THROUGH THE TECHNOLOGY LANDSCAPE



3-D Models Mean Less Radiation for Young Heart Patients

A UNIVERSITY OF MICHIGAN medical research team reports high levels of success from a new approach that uses a 3-D computer-assisted navigation system to treat children with rapid heartbeats and other heart-rhythm conditions.

Researchers at the university's Congenital Heart Center have studied a treatment called radio frequency catheter ablation in children. Data from the study shows that by adding the 3-D navigation system to a conventional X-ray-based method to visualize electrophysiological catheters inside the heart, doctors were able to successfully treat 99.1% of 113 patients studied. While the procedural success rate was very high, the most significant finding was that the patients who were treated using the 3-D computer navigation system were spared almost half the radiation dose received by 108 comparable patients treated immediately before the new system was available.



Images made using the 3-D computer-assisted mapping technique show the location of catheters in a child's heart.

"The goal of reducing radiation dose is especially important in children, because of the risk it can pose to their health and fertility later in life," says Dr. Peter Fischbach, senior author of the study. "Radiation exposure is very different for children and adults, due to their small body mass as well as their longer life expectancy, which allows for a greater likelihood of the radiation to cause adverse effects."

RF catheter ablation treatment uses electrical current transmitted at very high frequencies through a tiny catheter that's steered through the blood vessels and into the heart. The electricity is passed through the tip of the probe, cauterizing a small piece of heart muscle that supports the abnormal electrical activity that leads to fast heart rates, also known as tachycardia.



GROVES OF ACADEME

Learning-Friendly Agents Emerge From FSU Research

A TROUPE of computer-generated characters will be put to work to make online learning easier – if a Florida State University researcher's vision becomes a reality.

Amy L. Baylor, an associate professor of instructional systems and director of FSU's Center for Research of Innovative Technologies for Learning (RITL), is working to give computers a human face with animated 3-D characters that she calls "pedagogical agents." Her research has shown that the humanlike interface can dramatically enhance the ability of computers to serve as learning tools.



This stereotypical engineering mentor is one of Baylor's pedagogical agents.

"Up until now, the personal computer's potential to be a valuable teaching and learning tool has been stymied by its soulless nature," Baylor says. "At RITL, we're using computers to simulate human beings in a controlled manner so we can investigate how they affect and persuade people."

Baylor's pedagogical agents can mimic human emotional expressions, nonverbal communication and interactions.

Depending on the underlying system, students can interact with the characters in ways similar to their interactions with human teachers. The pedagogical agents can adapt to a student's strengths and weaknesses in a particular subject and provide emotional and cognitive feedback. In addition, the agents can be personalized to maximize the response of a particular group or individual, Baylor says.

"Unlike a human mentor, we can control all aspects of a pedagogical agent – its gender, age, ethnicity, personality, message and interaction style – to represent the ideal persona for facilitating learning," she says.

In one of several projects supported by the National Science Foundation, Baylor is investigating the use of such agents to challenge young women's stereotypes about the engineering profession by employing non-stereotypical engineering mentors with whom the target population may better relate.

Page compiled by Tommy Peterson.

Geek's Garden





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DIFFERENCE ENGINES






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Control complexity by pooling systems and managing them from a central location. Reducing your number of disconnected servers and storage.
Control costs with servers that partition virtually so you can do more with less on a single system.
Control time with systems and software designed to dynamically manage workloads and data storage, helping to optimize resources.
Control your IT destiny with IBM
of innovative servers and storage
to make your infrastructure and you
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Server and storage products may require purchase of more than one product or feature to enable the virtualization capabilities.
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Deciphering Options For Laptop Encryption

By choosing a vendor, our manager takes a big step toward protecting the company's intellectual property. By Mathias Thurman

SECURITY MANAGER'S JOURNAL

DURING THE past two weeks, I started up a disk encryption project, one of the technology initiatives under my company's intellectual asset protection program. (I will cover the deployment of the other technology initiative, digital rights management, in a future column.)

Our goal with the disk encryption effort is to prevent the loss of intellectual property stemming from the theft of a laptop. On several occasions, executives' laptops have gone missing or been stolen. One of those missing laptops contained intellectual property and sensitive data, including information on a pending acquisition, product strategy and road maps. Luckily, it was recovered.

Should something like that happen again, we want the data on the laptop's hard drive to be illegible, which means we have to encrypt the entire hard drive. I assembled a team of representatives from our help desk, Windows engineering and Web applications groups and my information security team. After the initial project meeting, which familiarized everyone with the scope of the project and the state of the technology, we considered three products: Microsoft Corp.'s Encryption File System (EFS), PGP Corp.'s Whole Disk and Pointsec Mobile Technologies' Pointsec for PC.

EFS was attractive in that it comes built into Windows and is therefore basically free. Plus Microsoft is a large company and we already have a relationship with it, so its viability and support structure aren't unknowns. But we wanted a product that would encrypt the entire hard drive and not just individual files, require no change in the way users utilized their laptops and be compatible across all of our platforms.

So, as appealing as EFS was, it was quickly eliminated, mostly because it can't encrypt the entire volume. Besides that, there are some issues regarding sharing files between Windows XP and Windows 2000, and there's a good chance that files could end up in areas of the drive that aren't encrypted. It's true that we could get around that last problem by using group policies to control the configuration of users' laptops, but the project team had decided against group policies. Finally, EFS doesn't support Linux, which would leave out many of our engineers.

On to PGP. I like PGP, and we use it for e-mail encryption. Almost every security professional I know has a PGP key, and I thought we could integrate that technology with the whole-disk encryption. Unfortunately, the PGP full-disk encryption offering is new, and the project team felt more comfortable with a product that has been around a while and has a history of large deployments.



The Best Choice

This left us with Pointsec for PC, which does in fact meet all of our requirements. It also has offerings for the Palm OS and Pocket PC operating systems and for some of our smart phones. Pointsec for PC uses a preconfigured agent that, when installed on a user's laptop, will seamlessly encrypt the entire hard drive and then modify the master boot record (MBR) so that a user must authenticate to the software embedded in the MBR before being allowed access to the PC.

As you probably know, the MBR is the information in the first sector of a hard drive that identifies where the operating system is located so that it can be booted into memory. Modifying the MBR is risky; if the hard disk is encrypted and the MBR becomes corrupted, the data on the drive is essentially gone. This is a risk that will have to be dealt with through proper backups.

Users, however, will still use their enterprise credentials and authenticate only one time. The software within the MBR will pass the authentication credentials through to the operating system log-in. Once authenticated, the user should see no noticeable degradation in service. The idea is that we'll configure the agent and place it on one of our intranet Web pages. Users who need or simply want to use full-disk encryption will contact the IT department and acquire the software and appropriate instructions.

As with any global deployment, we need to define a help desk support model. Pointsec accomplishes this with a Web-based tool that lets help desk administrators access a single management system to assist users in the event that they are locked out of a mobile device.

One of the concerns was what to do when employees leave the company or when a laptop has to be reviewed as part of an investigation or other legal/HR matter. Pointsec (as well as the other products mentioned) offers a key-escrow functionality that includes the concept of a "god key" that enables the laptop to be decrypted by a trusted authority. In our company, that trusted authority will most likely be me.

The next step in the project is to start a proof of concept to allow the team to become comfortable with the technology and to give us the opportunity to test the software against our extremely dynamic environment.

Unlike in financial services, health care and some other regulated industry, our users have all sorts of what I like to call funky applications installed on their laptops. For example, some engineers and developers have various debugging tools and employ multiboot environments, all of which will have to be tested at length. In addition, we are a global company, so we have to ensure that the product can be used on laptops with language packs or an operating system in another language.

But I'm fairly confident that we will have a successful deployment and will soon be providing this disk encryption software to address the current and future needs of the company. ▸

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computerworld.com/secjournal

SECURITY LOG

Security Bookshelf

***Extrusion Detection: Security Monitoring for Internal Intrusions*, by Richard Bejtlich (Addison-Wesley Professional, 2005).**



After reading this book, I'm still not sure what to make of the word extrusion, even though the author does explain himself. Nevertheless, this is a must-have for information security professionals responsible for protecting infrastructure. Many security books focus on protecting the network from the outside in. This one focuses on monitoring traffic leaving the network to identify malicious activity. The sections on network forensics and tracking down internal victims were especially interesting, since that's something my team does on a regular basis.

– Mathias Thurman

Software Assists in Risk Assessments

RiskWatch Inc. announced RiskWatch for Banks and Financial Institutions, decision-support software for conducting the IT security risk assessments required by myriad bank regulations. Incorporating the rules in regulations such as the Gramm-Leach-Bliley Act, the Framework for IT Risk Analysis and the new Bank Secrecy Act, RiskWatch creates Web-based surveys, analyzes the risk elements and creates fully automated reports. These reports include recommendations for return on investment of mitigating safeguards, a full analysis of cumulative loss expectancy and evaluation of solutions based on their cumulative loss-reduction potential.

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By choosing a vendor, our manager takes a big step toward protecting the company's intellectual property. By Mathias Thurman

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TRAINED IN THE ART
OF NETWORK
DEFENSE

BRIEFS

Adaptec Updates OS For Snap Servers

■ Adaptec Inc. in Milpitas, Calif., has unveiled its new GuardianOS Version 4.0 operating system for its Snap Server line of network-attached storage (NAS) devices. The product features new Unicode support, new eTrust antivirus software from Computer Associates International Inc., an integrated 5006B virtual tape library and an easier-to-use graphical interface, according to the company. It also includes graphical RAID representation, Windows-to-Unix mapping of security, user and group identifiers, and improved share creation and share security. The upgraded operating system is available now for $599 per Snap Server or is included on all new Snap Server NAS devices.

Layton Releases Database Manager

■ Layton Technology Inc. in Tampa, Fla., has released Layton Database Manager. The product is designed to help manage Microsoft Corp.'s free SQL Server 2005 Express Edition and SQL Server 2000 Desktop Engine, according to Layton. Pricing is $795 per site license and $2,495 for an enterprise license, which includes 60 days of e-mail and phone support.

TimeSpring Releases Data Protection Tool

■ TimeSpring Software Corp. in Newport Beach, Calif., has announced the general availability of its continuous data protection product for Microsoft SQL Server 2005. TimeData for Microsoft SQL Server allows users to recover from data loss, corruption or other issues within minutes, according to TimeSpring. TimeData captures all changes to SQL Server databases in real time to an on- or off-site repository, allowing users to migrate real-time production data from SQL Server 2000 to SQL Server 2005 without shutting down. Pricing starts at $1,295 for a single file server.

MARK WILLOUGHBY

A Cure for Storage Hardware Dependence

NETIZENS, like digital drug addicts, keep buying ever-larger fixes of storage for all the high-definition content on the planet. But back at the knowledge ranch, weird science is going to help us kick the storage habit and the hardware economics that keep us addicted.



MARK WILLOUGHBY, CISSP, is a 20-year IT industry veteran and journalist. He can be reached at mwilw@messagingarchitect.com.

Consider that corporate data storage is exploding at a 60% annual clip, driven by the need to meet regulatory compliance dictates, keep full-motion video online and support ever-increasing amounts of analysis and correlations for that elusive competitive advantage. Small wonder that the incessant demand for storage means storage revenue grows almost twice as fast as that of the lowly server segment.

These halcyon days of hardware-dominated storage can't last. Current storage costs depend on the economics of hardware. Hardware factors such as magnetic and optical densities determine how much intelligence is needed in controllers, how to optimize redundancies and how to engineer expansion. Optimizing hardware will never remove storage bottlenecks for users pushing the limits of system performance defined by more hardware.

The future of storage lies in kicking the hardware habit. The storage equation must be inverted, with smarter software processing the information before it ever sees hardware. The brave new world of storage economics requires very intelligent software with new algorithms that automate data compression before it's sent to the storage farm.

Entrepreneurs without a stake in the existing world order are moving beyond the rules of data communications and storage laid down by Claude Shannon in 1948. Shannon, dubbed the father of information theory, said that data is a collection of bits and bytes that have no intrinsic value and are mere commodities to be moved and stored.

With the economics of storage, we know now that information has intrinsic value. Patterns and knowledge do in fact exist in Shannon's random collection of bits and bytes. A huge marketplace is waiting to form around the notion that information can be ordered, the similarities removed, and only the differences stored. Imagine the savings.

Focusing on the changes is a proven methodology today, used in display and presentation algorithms like Flash and AJAX. By sending only the parts of the display that change, we can save huge amounts of communications bandwidth and push system bottlenecks back into the storage quagmire.

A promising theoretical fix to the hardware-based economics of storage is autosophy (*www.autosophy.com*), invented and marketed by a small San Francisco-based research firm of the same name. The word *autosophy* comes from the Greek words *auto* (self) and *sophia* (knowledge or wisdom), and its inventors call it the new science of "self-assembling structures."

Autosophy is based on algorithms that selectively acquire knowledge from information and data in random environments. This acquired knowledge grows complex data constructs without human intervention. Examples of self-assembling structures in nature include trees, crystals and even complex societies like beehives and ant colonies.

Here's how autosophy is going to cure our storage addiction. It starts with the concept of an "engram" — a unit of knowledge. Knowledge can be learned only once. You can't learn what you already know, and repeating what the receiver already knows adds no knowledge. Efficient communications send only engrams, telling receivers what they don't yet know and thus omitting all the background information already known or acquired. Focusing only on engrams obviously yields a huge economic benefit by eliminating all the transmission and storage of redundant information.

A second key to the autosophy concept is an address token called a tip. Unlike the monetary reward for good service, an autosophy tip is the address for an engram. In video communications and storage, each tip could represent that part of a frame that changed — the engram of new information that moves the action in the video. The variability of an engram eliminates any relationship between information and data volume — a tip can represent any amount of data, from a letter to an entire book or video.

The last part of your autosophy primer is the completed whole, or "hyperspace knowledge library." This new type of data construct must be identical in both the transmitter and receiver, just like in parity-controlled traditional data storage and communications. Autosophy communications becomes more efficient as the hyperspace knowledge library grows and assembles. It can be shared prior to transmission or self-assembled from the tip codes during transmission.

Among humans, the hyperspace knowledge library analog is that people without much knowledge communicate less efficiently than experts with a great deal of knowledge, or engrams must be in short supply in Washington. ▸

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BRIEFS

Adaptec Updates OS For Snap Servers

■ Adaptec Inc. in Milpitas, Calif., has unveiled its new GuardianOS Version 4.0 operating system for its Snap Server line of network-attached storage (NAS) devices. The product features new Unicode support, new eTrust antivirus software from Computer Associates International Inc., an integrated 500GB virtual tape library and an easier-to-use graphical interface, according to the company. It also includes graphical RAID representation, Windows-to-Unix mapping of security, user and group identifiers, and improved share creation and share security. The upgraded operating system is available now for $500 per Snap Server or is included on all new Snap Server NAS devices.

Layton Releases Database Manager

■ Layton Technology Inc. in Tampa, Fla., has released Layton Database Manager. The product is designed to help manage Microsoft Corp.'s free SQL Server 2005 Express Edition and SQL Server 2000 Desktop Engine, according to Layton. Pricing is $795 per site license and $2,495 for an enterprise license, which includes 60 days of e-mail and phone support.

TimeSpring Releases Data Protection Tool

■ TimeSpring Software Corp. in Newport Beach, Calif., has announced the general availability of its continuous data protection product for Microsoft SQL Server 2005. TimeData for Microsoft SQL Server allows users to recover from data loss, corruption or other issues within minutes, according to TimeSpring. TimeData captures all changes to SQL Server databases in real time to an on- or off-site repository, allowing users to migrate real-time production data from SQL Server 2000 to SQL Server 2005 without shutting down. Pricing starts at $1,295 for a single file server.

MARK WILLOUGHBY

A Cure for Storage Hardware Dependence

NETIZENS, like digital drug addicts, keep buying ever-larger fixes of storage for all the high-definition content on the planet. But back at the knowledge ranch, weird science is going to help us kick the storage habit and the hardware economics that keep us addicted.



Consider that corporate data storage is exploding at a 60% annual clip, driven by the need to meet regulatory compliance dictates, keep full-motion video online and support ever-increasing amounts of analysis and correlations for that elusive competitive advantage. Small wonder that the incessant demand for storage means storage revenue grows almost twice as fast as that of the lowly server segment.

These halcyon days of hardware-dominated storage can't last. Current storage costs depend on the economics of hardware. Hardware factors such as magnetic and optical densities determine how much intelligence is needed in controllers, how to optimize redundancies and how to engineer expansion. Optimizing hardware will never remove storage bottlenecks for users pushing the limits of system performance defined by more hardware.

The future of storage lies in kicking the hardware habit. The storage equation must be inverted, with smarter software processing the information before it ever sees hardware. The brave new world of storage economics requires very intelligent software with new algorithms that automate data compression before it's sent to the storage farm.

Entrepreneurs without a stake in the existing world order are moving beyond the rules of data communications and storage laid down by Claude Shannon in 1948. Shannon, dubbed the father of information theory, said that data is a collection of bits and bytes that have no intrinsic value and are mere commodities to be moved and stored.

With the economics of storage, we know now that information has intrinsic value. Patterns and knowledge do in fact exist in Shannon's random collection of bits and bytes. A huge marketplace is waiting to form around the notion that information can be ordered, the similarities removed, and only the differences stored. Imagine the savings.

Focusing on the changes is a proven methodology today, used in display and presentation algorithms like Flash and AJAX. By sending only the parts of the display that change, we can save huge amounts of communications bandwidth and push system bottlenecks back into the storage quagmire.

A promising theoretical fix to the hardware-based economics of storage is autosophy (*www.autosophy.com*), invented and marketed by a small San Francisco-based research firm of the same name. The word *autosophy* comes from the Greek words *auto* (self) and *sophia* (knowledge or wisdom), and its inventors call it the new science of "self-assembling structures."

Autosophy is based on algorithms that selectively acquire knowledge from information and data in random environments. This acquired knowledge grows complex data constructs without human intervention. Examples of self-assembling structures in nature include trees, crystals and even complex societies like beehives and ant colonies.

Here's how autosophy is going to cure our storage addiction. It starts with the concept of an "engram" — a unit of knowledge. Knowledge can be learned only once. You can't learn what you already know, and repeating what the receiver already knows adds no knowledge. Efficient communications send only engrams, telling receivers what they don't yet know and thus omitting all the background information already known or acquired. Focusing only on engrams obviously yields a huge economic benefit by eliminating all the transmission and storage of redundant information.

A second key to the autosophy concept is an address token called a tip. Unlike the monetary reward for good service, an autosophy tip is the address for an engram. In video communications and storage, each tip could represent that part of a frame that changed — the engram of new information that moves the action in the video. The variability of an engram eliminates any relationship between information and data volume — a tip can represent any amount of data, from a letter to an entire book or video.

The last part of your autosophy primer is the completed whole, or "hyperspace knowledge library." This new type of data construct must be identical in both the transmitter and receiver, just like in parity-controlled traditional data storage and communications. Autosophy communications becomes more efficient as the hyperspace knowledge library grows and assembles. It can be shared prior to transmission or self-assembled from the tip codes during transmission.

Among humans, the hyperspace knowledge library analog is that people without much knowledge communicate less efficiently than experts with a great deal of knowledge, or engrams must be in short supply in Washington. ▮

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Working Through the Pain
Many IT groups that have sent work offshore have been disappointed, but some stuck with it, learned from their mistakes and forged valuable long-term relationships with offshore vendors. **PAGE 46**

Career Watch
A proposal for a new onshore model for business process outsourcing; the happiness of IT workers; and proposing changes to the computer science curriculum. **PAGE 51**

OPINION
Katrina Brought Out the Best in IT
Bart Perkins congratulates a large group of IT vendors that joined forces to assist with relief after Hurricane Katrina. Rallied by the American Red Cross, they put aside competition and profit and put forth a highly effective team effort. **PAGE 52**



IT Under The Gun

Emergency implementations offer lessons for the corporate world.

BY MARY K. PRATT

Keith R. Thode's clients needed help, and fast. So he loaded up his car with two volunteers and a variety of equipment and hit the road, driving from his Dallas office right into a disaster zone.

Thode, chief operating officer at Aidmatrix Foundation Inc., was among the hundreds of people who raced south to help after Hurricane Katrina. But instead of handing out food or administering first aid, Thode helped get essential relief-related IT systems up and running. "In a time of crisis, we had to be there," he says, citing Aidmatrix's mission. The nonprofit foundation develops Internet-based software to help humanitarian organizations better manage supplies.

Hurricane Katrina tested many people's ability to work under the gun. Front-line relief workers handled the most publicized challenges, but IT practitioners dealt with unusual and pressure-filled job demands.

The circumstances around Katrina might seem unique, but many tech professionals occasionally find themselves working in extreme conditions, trying to establish networks or troubleshoot applications far from the comforts of their offices. Such situations make for good stories, but they also provide important pointers on how to work more effectively in everyday situations.

Here are some IT lessons learned in extreme conditions:

Keep it simple. The U.S. Army uses commercial hardware and software when it sets up satellite connections in Afghanistan, Iraq and other remote or hostile areas. Soldiers in the field can set up satellite communications in just a few steps, says Kevin Carroll, an Army program executive officer for enterprise information systems based in Fort Belvoir, Va. They unpack and set up the equipment within 30 minutes, then need only to push a button to have the equipment search for a satellite for the actual transmissions. "We structure it to be easy to use," Carroll says. He explains that soldiers are trained in multiple disciplines, but most aren't IT professionals, and the Army can't rush experts to the scene every time a satellite link is needed.

"We wanted something everyone could use with minimal training," Carroll says. "What we need are very simple systems, not a lot of fancy bells and whistles. That differs from the commercial market, where they want you to have all these new network options and all these reports and all these fancy things that require you to have the tech guy."

Carroll says IT executives, whether military or corporate, should question whether they need such advanced technology or whether their missions could be met with simpler (and often cheaper) equipment.

Escalate suggestions to the next level. Good ideas get lost even under normal working conditions, so it's easy to imagine how they could get overlooked in a crisis. Consider, for example, that the computers the American Red Cross set up in Louisiana will be wiped clean when the work is done. Any new program installed on the fly, no matter how helpful, won't make it to the next disaster zone, says Matthew Feeney, information systems manager at the St. Paul, Minn., American Red Cross chapter and volunteer manager of the organization's Response Technical Team.

So when a volunteer in Louisiana suggested using Microsoft Windows SharePoint to prevent data loss, Feeney made sure the idea first went to the right people in headquarters, who then approved it. Sound like bureaucracy? Not quite, Feeney says. The process ensures that this good idea will be incorporated in future work.

Use personalities to your advantage. Feeney's staff in Louisiana was an odd mix of business and IT executives, students and workers of every experience level. More important, though, Feeney found that these volunteers had a mix of personalities, too.

"You have your natural born leaders.

PHOTOS COURTESY OF U.S. ARMY PEOPLE

Then you have people like me: I can lead, follow or step aside. And then you had others who were competent and fantastic but didn't want to be responsible for making a decision," he says.

Feeney realized that as he was assembling teams, he couldn't "have too many chiefs in one pile and too many people waiting to be told in another." So he assigned people based on their personalities and their ability to work well together — rather than forcing everyone to get along all the time.

Consider all personnel possibilities. After Hurricane Katrina, Thode's job was to scale and adjust Aidmatrix's Internet-based software for use by Adventist Community Services and America's Second Harvest – the Nation's Food Bank Network. His work involved more than programming changes. He helped the agencies physically set up their systems as well as install and run Aidmatrix software.

So when Thode needed to connect Adventist's computers to the Internet, he initially considered using his backup long-distance dial-up Internet account. But a better solution came from an unexpected place: an 82-year-old volunteer from Oregon, who handed him the local Louisiana EarthLink number — a number the volunteer had looked up before he left home.

Thode later found another unlikely source of help. While setting up an emergency relief center in Texas, he learned that the pastor in charge had been a warehouse manager before attending the seminary. Having a team member experienced in the processes and procedures of warehousing proved invaluable.

"People get overlooked based on everything from age to how they come off," Thode says. But good managers seek out expertise from all sources and then pull those people into the team.

Foster a service attitude. It's easy to forget relationships when work focuses on routers, servers and networks. But Thode can attest to the importance of building rapport among colleagues. "The relationships helped us get right to work," he says.

When he showed up at 1 a.m. on a Sunday outside a previously vacant facility taken over by America's Second Harvest, agency workers welcomed the unexpected support. Work started immediately, despite the hour, and later that day, Thode was rolling out new systems and training agency staff.

Thode says the seeds of such cooperation are sown well before a crisis. "It's really an attitude you have to ingrain in your staff. So whether you're selling widgets or you have an IT department that supports a sale, take a service attitude," he says. That approach will win points with clients, whether they're signing a contract or queuing up for emergency supplies.

Name a point person. Lt. Col. Mike Plummer commands the Army's 67th Signal Battalion and oversees teams of IT workers who support field work. After Hurricane Katrina, his battalion deployed to Camp Shelby, Miss., to support relief operations, taking with it data packages that included equipment needed for secure Internet, phone and network connections.

"I can put [data packages] in the middle of nowhere, power them and support a customer," Plummer says. In fact, just 25 hours after arriving, his troops had set up a secure videoconference system that was capable of handling meetings between Camp Shelby and President Bush.

Although the 67th Signal Battalion was deployed to support Army relief efforts, Plummer says his troops served civilian organizations as well. For example, they supplied equipment and set up civilian computers to connect and work through the Army's network.

Multiple customers can put extreme demands on staff, however, and that can slow down a job, Plummer says. "You might have [only] one person who knows how to operate that widget, and if that person gets interrupted every other minute, they can't get their job done," he says.

To make sure competing demands didn't distract workers, Plummer gave customers a place to vent — a point person who could handle complaints and questions — leaving other workers free to work.

Employ "after-action reviews." After his battalion's deployment to Mississippi in September, Plummer says he realized he should have brought along the Computer Emergency Response Team, which monitors for intrusions and helps protect the Army's network against them.

To ensure that he doesn't leave the team behind again, Plummer incorporated the idea in the "after-action review," sometimes called a postmortem in the corporate world.

The Army writes up such reviews following exercises and deployments, outlining what went right, what went wrong, how to sustain strong points and how to fix mistakes. "Then you incorporate that into any future training that you do," Plummer explains.

Be flexible. As Thode drove into Louisiana, he knew he might have to perform tasks outside his normal responsibilities. Sure enough, his clients called on him for jobs that had nothing to do with his software expertise. He helped one volunteer choose a computer from an electronics store. And he drove 150 miles to get cellular modem cards for America's Second Harvest.

He handled tasks large and small with equanimity. "Understand that rules and structure are there to support you in achieving the mission," he says, "but sometimes the base lines change."

Pratt is a Computerworld *contributing writer in Waltham, Mass. You can contact her at marykpratt@verizon.net.*

IT WORKERS can put their skills to the test by volunteering their expertise.

The American Red Cross welcomes volunteers with specific professional proficiencies and will place them in assignments where they can flex that expertise, says American Red Cross spokesman Daniel Graver.

Although all volunteers are welcome, Graver says, the relief agency specifically needs people with technical skills. "The stuff they do is superimportant," he says, pointing out that IT volunteers frequently set up communication lines and computer networks in areas that have no other connections.

Be prepared for the challenge. "Anything we're doing with communications and technology, you're working under extreme circumstances, you're working long hours, and you never know what you're going to be working on," Graver says.

IT professionals can contact their local American Red Cross chapters to sign up as volunteers. Local chapter information can be found at the organization's Web site, www.redcross.org.

– MARY K. PRATT

KEVIN CARROLL



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> **KEVIN CARROLL** PROGRAM EXECUTIVE OFFICER FOR ENTERPRISE INFORMATION SYSTEMS, U.S. ARMY

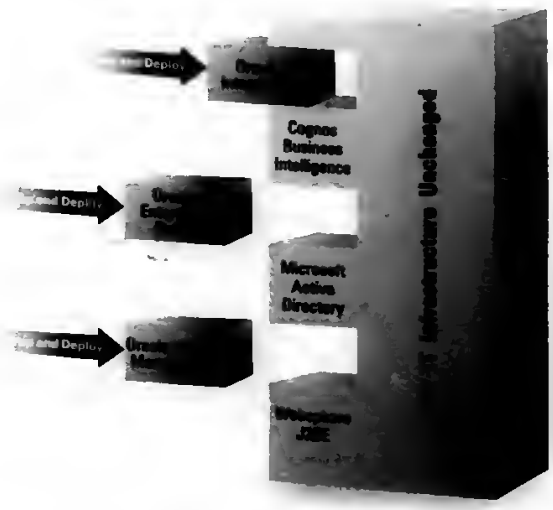
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Working Through the Pain



After rocky starts, some U.S. clients are learning how to get better results offshore.

BY THOMAS HOFFMAN AND PATRICK THIBODEAU

FIRST-TIME offshoring customers often encounter a rash of unexpected difficulties, such as lower-than-anticipated cost savings and the need to send IT managers overseas for extended periods to resolve project problems.

So serious are these issues that more than half of customers end outsourcing contracts prematurely, according to a recent survey.

Nevertheless, some offshoring customers that have encountered problems with overseas engagements have stuck with their providers, learned from their mistakes and applied the lessons to strengthen those relationships.

Offshore Surprises

Organizations that send some of their IT work overseas have to contend with all sorts of challenges, including time zone, cultural and language differences.

As a result, dissatisfaction with offshore outsourcing is on the rise, according to two independent surveys of IT managers and businesses conducted earlier this year.

Last spring, Chicago-based Diamond-Cluster International Inc. surveyed 210 senior IT executives at Global 1,000 companies and 242 executives at outsourcing service providers and found that over the previous year, the percentage of users satisfied with offshoring providers fell from 79% to 62%. Even more telling was the number of customers who prematurely ended domestic or offshore outsourcing contracts within a year: That figure jumped from 21% in 2004 to 51% this year.

Several factors have contributed to dissatisfaction with offshore outsourcing agreements, says Tom Weakland, a managing partner at DiamondCluster. Fierce competition for top talent among offshore providers has led to increased employee turnover, and the type of work that customers are sending overseas is becoming more complex. Both of these elements are leading to a rise in troubled projects and missed deadlines.

Moreover, because the number of offshore providers has risen dramatically, buyers are facing increased risks, such as the possibility of vendor financial instability or the inability of new entrants to attract and retain top talent at low costs.

And customers often underestimate the changes wide-scale outsourcing deals can entail. "You're talking about complex business change and transformation," Weakland says.

It's not surprising that PricewaterhouseCoopers reported similar results in a study released in September. The firm surveyed IT and business executives at 156 financial services firms, and only half of the respondents said they were satisfied with offshore providers, citing problems with cost overruns, staff retention and cultural differences.

But dissatisfaction doesn't seem to be slowing the offshoring trend. In the PricewaterhouseCoopers survey, 74% of the respondents said they plan to increase their use of offshore contractors.

While some dissatisfied clients have jettisoned their offshore agreements, others have hunkered down to learn from their mistakes.

At one point in his career at Cable Scope Inc., Bret Brase worked with Indian outsourcing companies whose sales pitches would include the claim that they were able to do work while their U.S. customers were sleeping. But Brase discovered that following the sun isn't all it's cracked up to be. "The difficulty is that you need to collaborate," and that's a problem when one party is asleep, says Brase, now a partner at the New York-based provider of spot advertising for cable television.

So when Cable Scope decided last year to modernize a 16-year-old automated system that enables its customers to buy and sell media content, it didn't turn to India. Instead, it looked a little closer to home and asked Argentina-based Globant to put together a needs assessment, straighten out the business logic and revamp the system from its IT center in Buenos Aires.

Although Cable Scope has benefited from being only two hours behind Globant's IT workers, Brase and his colleagues still had a rocky road early on. "We weren't nearly as prepared as we should've been to manage these guys, and it's going to cost us time," says Brase. For example, on the front end of the system modernization effort, the Globant team created a set of data prototypes that met Cable Scope's requirements, says Brase. But when the Globant team developed graphical user interface (GUI) screens afterward, the information on the screens didn't meet expectations. So he and other Cable Scope executives had to fly to Argentina for a few weeks to "pound through the communications," he says.

LESSON LEARNED: "We should have asked for detailed mark-ups [of the GUI

Continued on page 50

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"We experienced a learning curve and a cultural learning period."

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Continued from page 46

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In addition to communication problems, lower-than-expected cost savings can also disappoint novice offshore outsourcing customers. Part of the problem is that many new customers buy into the hype that they're in for huge savings, when offshore vendors tout development rates of $15 per hour while $90 is common in the U.S.

But those per-hour charges are only the tip of the iceberg, says Lee Jones, CIO at Stratex Networks Inc. in San Jose. That's because many clients of offshore contractors fail to account for time zone differences and project delays that lead to extra travel for the customer, says Jones. As a result, actual costs can end up being closer to $45 an hour, he says.

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The quality of code is another sticking point. Jones, who uses offshore developers for special projects to supplement his own internal IT department, says code produced offshore doesn't necessarily meet domestic standards.

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To address that issue, Jones has learned to put together detailed coding specifications for vendors, along with rigorous acceptance criteria for the code that's produced.

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"We were pretty intuitive, and I felt strongly that [Cognizant] had to be part of the IT team," he explains.

So Brennan visited the Cognizant offices in Chennai and Bangalore in January 2000, and he and other executives at U.S. Cold Storage encouraged the Cognizant team members from both the U.S. and India to visit its plants in California, Illinois and Texas to gain a better understanding of its business.

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The more U.S. companies deal with offshore outsourcers, the more complex and demanding the relationships prove to be. But among the many lessons to be learned from offshore experiences is that, like any vendor relationship, offshore partnerships need time, resources and patience to develop properly.



Career Watch



In a nutshell, what is your proposal, and what do you hope to accomplish with it? To use full-time undergraduate and graduate students to support business services that currently are being offshored. Laid-off workers, augmented by "active" corporate workers, would serve as mentors, project managers or project leads to ensure that work done by students is of equal or better quality than what is done by offshore vendors.

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You've been in touch with some members of Congress. How can they help this plan materialize? Since this issue is national in scope, I have requested guidance from congressional officials, in particular senators for economic development. Federal grants will be needed to help implement the model, as well as provisions in legislation that would lower operational costs for the companies that administer the program. Jointly, these two factors will enable the strategy to evolve and grow.

Who would administer such programs? Universities, or the companies that hire the students? U.S. companies and universities would form joint ventures, and a third party would serve as liaison, employing the students and providing management process and controls. This liaison between the universities and their client companies will be a for-profit U.S. corporation eligible for grants from the government and advised by representatives from government, the companies and the schools.

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For more on Chebbi's onshore BPO proposal, download the PDF at http://deepakchebbi.com/a-bpo.pdf.

PAGE COMPILED BY JAMIE ECKLE.



SOURCE: AMPLITUDE RESEARCH INC., BOCA RATON, FLA.

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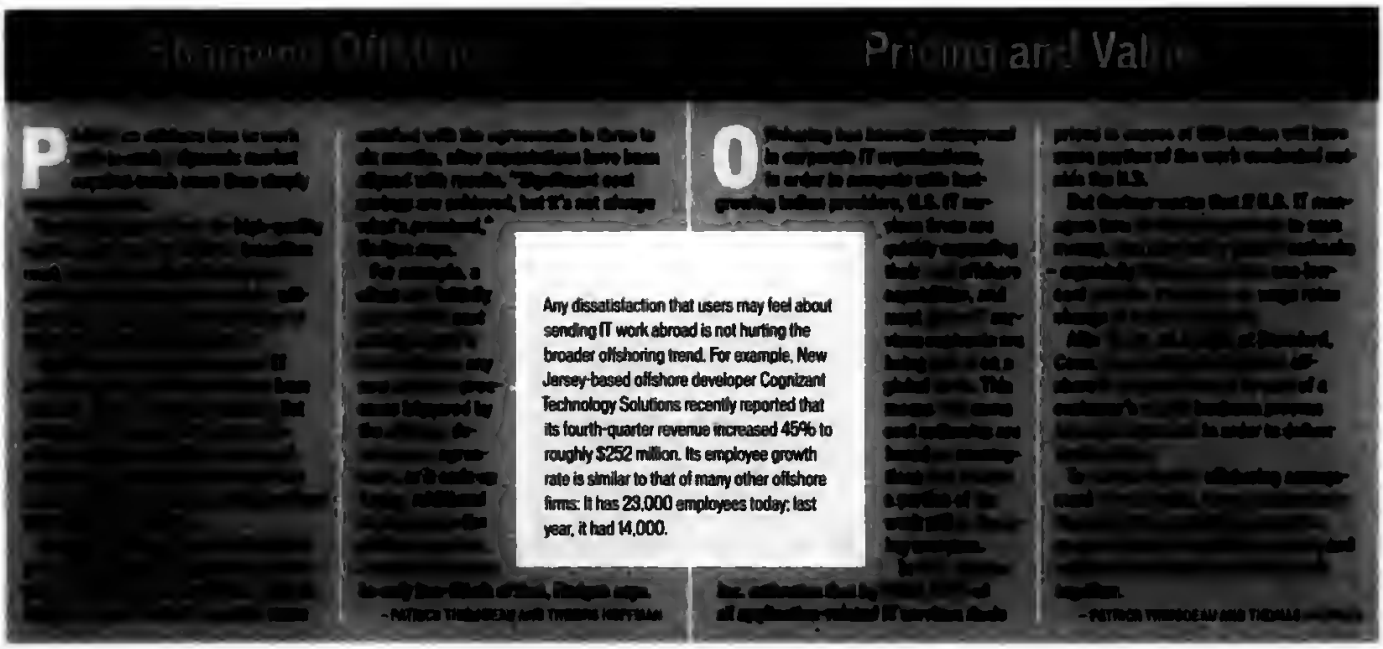
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Career Watch

Deepak Chebbi



Q&A

Deepak Chebbi has a plan. His vision of a new onshore model of BPO is designed in a way that he says will accomplish several goals, save U.S. jobs that might otherwise go offshore, make the nation more secure, create work for laid-off IT workers, and give college students hands-on IT experience and reason to believe that there is a future in IT. Chebbi recently spoke with contributing editor Jamie Eckle.

In a nutshell, what is your proposal, and what do you hope to accomplish with it? To use full-time undergraduate and graduate students to support business services that currently are being offshored. Laid-off workers, augmented by "active" corporate workers, would serve as mentors, project managers or project leads to ensure that work done by students is of equal or better quality than what is done by offshore vendors.

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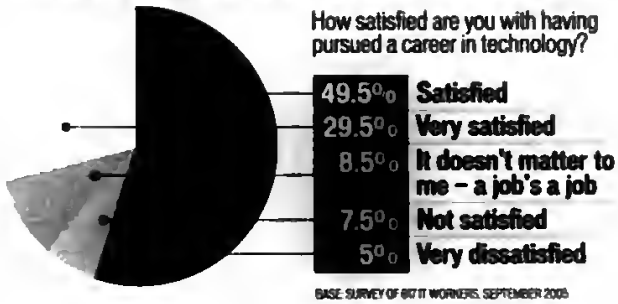
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PAGE COMPILED BY JAMIE ECKLE

We Like IT, We Really Like IT!



BASE: SURVEY OF 617 IT WORKERS, SEPTEMBER 2005

SOURCE: AMPLITUDE RESEARCH INC., BOCA RATON, FLA.

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BART PERKINS

Katrina Brought Out The Best of IT

HURRICANE KATRINA was the worst natural disaster in U.S. history. It displaced more than a million people and created a federal disaster area covering 90,000 square miles. Its effects were unprecedented, but the response from the IT industry was powerful. Working through the American Red Cross, the industry donated tens of millions of dollars in cash, products and services.

Companies also sent thousands of volunteers into the area to support relief efforts. This is the story of one disaster response effort that had enormous impact.

Katrina hit New Orleans on Monday, Aug. 29. The magnitude of the disaster increased significantly on Tuesday when the levee broke and the flooding began. Steve Cooper, CIO at the American Red Cross, realized that the response effort required would be enormous. He knew that the capacity of his IT organization, while extensive, would fall short of what was needed, so he asked the CIOs at his major IT suppliers to meet at Red Cross headquarters in Washington.



BART PERKINS is managing partner at Louisville, Ky.-based Leverage Partners Inc., which helps organizations invest well in IT. He was previously CIO at Tricon Global Restaurants Inc. and Dole Food Co. Contact him at BartPerkins@LeveragePartners.com.

On Thursday, Sept. 1, 60 executives from 27 organizations attended the meeting on one day's notice, and all of them offered help. The participating companies included giant vendors and small suppliers spanning the industry (see *www.redcross.org/sponsors/helping.html*). They agreed to contribute cash, products, services and people to the relief efforts.

At the initial meeting, three things happened that were critical to the success of the effort. First, Cooper asked the companies to put aside industry competition and focus on helping the victims. They did. Second, Cooper admitted that he didn't have the resources to respond sufficiently and asked for help. Several attendees stated their admiration for his candid and timely request for help. Often, they said, people wait too long to ask for assistance. Third, the Red Cross asked the group to formulate a plan together, instead of mandating a particular solution.

By late Thursday, the group had come up with a relief strategy, and by Saturday — just five days after Katrina hit — multicompany teams began work on the following major IT projects:

SHELTER SERVICES. One team developed a system to register and track people in shelters. This was not straightforward, since shelters were created in multiple locations (schools, churches, hotels and public buildings) and opened and closed in response to changing demands. Intel and Cisco led the team that donated and installed a standard communications kit at each site, including PCs, VoIP phones, wiring and supporting infrastructure. These kits served as phone banks and computer centers for each shelter, enabling survivors to communicate with family members.

FINANCIAL ASSISTANCE. Normally, the Red Cross sends response teams into disaster areas to physically give debit cards to victims, but the devastation wrought by Katrina precluded this approach. Instead, the financial assistance team, led by Avaya and SBC, constructed a California call center where survivors could register and have funds wire-transferred to a Western Union office. The 400-seat call center was created in one week and handled a large call volume daily.

THE "FAMILY LINKING" INFORMATION DATABASE. More than 50 uncoordinated Web sites sprang up after Katrina in an effort to identify victims and reunite families. Microsoft, Yahoo and Google worked together to develop a system to crawl the Web to search these sites. Then they created a central repository, KatrinaSafe.org, to enable family members to connect with one another. IBM and the San Diego Supercomputer Center developed the sites's back-end matching program to remove redundancies and make the remaining entries as unambiguous as possible.

INFRASTRUCTURE. This team provided the technology underpinnings that enabled the other teams to operate effectively. It expanded the network capacity of the Red Cross by 400% in two days, enabling effective communication among volunteers, suppliers, shelters, and Red Cross field operations and headquarters. Additional efforts expanded existing Red Cross systems to collect contributions and register and screen volunteers.

For a month, these multicompany IT teams worked long hours to help the victims. Fortunately, each of the companies involved had executive management that actively supported the projects. This enabled the various teams to divert their companies' goods and services to the relief efforts without red tape. (For team reports and photos, visit *www.wirelessfort.net/blog* and *http://spaces.msn.com/members/edfaulkner/*.)

Several key lessons have emerged from this effort:

The private sector has an important role to play in disaster preparedness and disaster response. U.S. citizens expect government and relief agencies, including the Red Cross, to lead these efforts. However, the private sector has the ability to move quickly, the necessary key skills and the desire to provide disaster assistance.

The U.S. needs a powerful public/private alliance that can be activated during times of national emergency. It's only a matter of time until the next hurricane, earthquake or pandemic, such as the bird flu, hits. It's much easier to get cooperation from people you already know. Cooper contacted companies that were already providing products and services to the Red Cross. Now that an ad hoc IT disaster response group has been formed, a more permanent partnership can be established in anticipation of future situations.

Good communication is critical to successful disaster response efforts. At times, communication among volunteers, government relief workers, government agencies and the Red Cross broke down. This resulted in extra field work and occasional missed opportunities to help victims. The importance of communication is often underestimated because people assume it will happen naturally. But the scale and scope of communication channels often demand more attention than anticipated.

The post-Katrina finger-pointing was almost as bad as the hurricane itself. Local, state and federal officials all blamed one another for not being prepared and not responding quickly enough. In contrast, the IT teams cooperated superbly and produced excellent results. Relief team members experienced strong camaraderie, were proud to be part of the efforts and described their participation as a deeply rewarding personal experience.

This column salutes the IT industry for reaching far beyond the walls of competition to serve the victims of a terrible disaster. Thank you all for your outstanding collaboration and for leveraging your expertise to make an important difference in so many lives.

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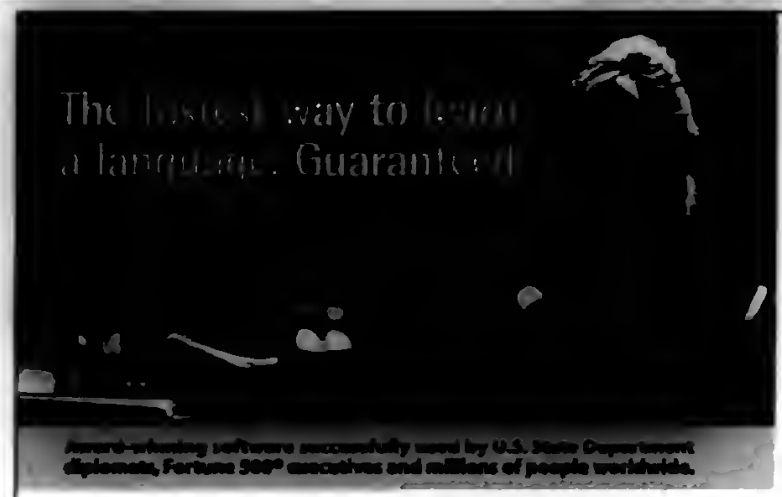
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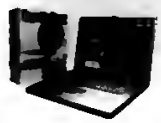
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IT Careers: The Diversity Challenge

One sure way to create a diverse workforce is to hire new information technology professionals. Nationwide, headquartered in Columbus, OH, is relying on high volume hiring to attract people of diverse experience, diverse background, diverse ethnicity and diverse gender.

According to Randy Stevens, the Director of IT Recruiting for Nationwide, the insurance company has IT jobs across the country with larger-sized organizations in Columbus, OH, Des Moines, IA, Portland, OR, Sacramento, CA, Scottsdale, AZ and Austin, TX. Nationwide has better than 5,500 IT associates, and "we are increasing total people dramatically," says Stevens. There has been a 48% increase in new hires over the past year – 17% of the new IT associates identified themselves as minorities and 29% were women.

The majority of IT hiring is in the application development job family with titles ranging from senior developer to project leader. IT architects are also in demand as the company moves from its legacy system to an enterprise JAVA architecture. Nationwide defines itself as an information-centric company, and the IT organization makes up 29% of the overall company workforce.

"Our CEO defines three to five strategic intents every year, and for 2005 one of these was increasing diversity of our workforce," Stevens explains. "Traditionally, financial services or insurance companies have been more conservative – and a conservative approach to hiring is not to hire outside the box. But we believe it is a strategic imperative to do so if we are going to branch into areas we didn't even think of in the past."



Stevens says the company relies on a strong development process to keep new associates with Nationwide. "Our IT turnover rate is low. The average tenure of IT associates with Nationwide is 10.3 years, compared to 2.5 years in the rest of the market. But that stability doesn't limit your ability to grow. We are hiring and will continue to hire. Our formal development program helps us continuously identify the competencies we need for the future, and then our associates and managers rank each person against those competencies. The result is that we can identify where opportunities exist, identify gaps and help people move into those areas."

For more information about IT Careers advertising, please call: 800.762.2977

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SOFTWARE ENGINEER, Multiple Openings. Job located in Newark, Delaware and various unanticipated client sites throughout the United States. Research, analyze, design, develop and implement software/systems applications in a client/server environment; will also design, implement and maintain various programming and operating systems; will work in a team environment testing and developing software/systems applications in accordance with project specifications; will also work under the close supervision of the project manager. Minimum of a Bachelor's Degree or equivalent in Computer Science, CIS, Engineering, Mathematics, Electronics, Business, Management, Technology or a related field required; position also requires extended travel and/or relocation. One (1) year prior professional experience in software design and development necessary. Attractive compensation package. Mail resumes to American Solutions, Inc., Job #SE01, 100 Commerce Drive, Suite 103, Newark, DE 19713.

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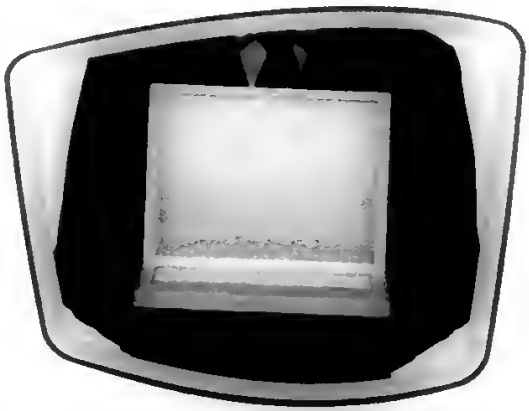
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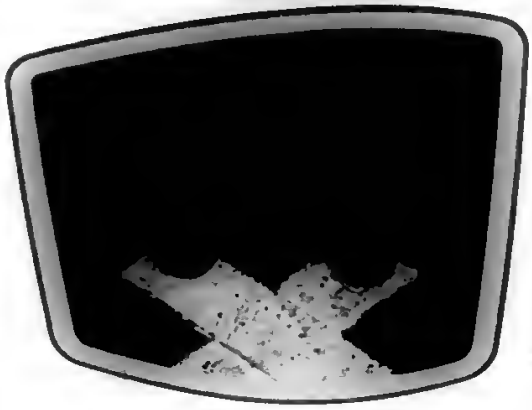
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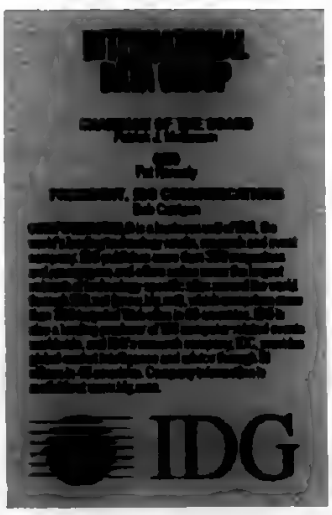
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Sun

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As the OpenSolaris effort shows, however, the development community moves slowly. To date, most of the OpenSolaris community development work has been on bug fixes and minor updates.

Even so, Sun officials said there is significant open-source community development work in progress that may or may not bear fruit. The projects include porting Solaris to IBM's PowerPC chip and porting DTrace, an application performance tool in Solaris 10, to FreeBSD, an x86-compatible operating system.

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For instance, Devon O'Dell, a systems engineer at iXsystems Inc. in San Jose, is working on donated equipment on his own time to port DTrace to FreeBSD. O'Dell said that the project will take a year or more to complete but that a corporate sponsor could help reduce development time to six months.

Rich Teer, a Unix consultant in Kelowna, British Columbia, is working on an open-source Solaris project affecting its terminal session. The project is getting his "spare time," but Teer said he expects to complete it in January.

Analysts aren't predicting how Sun's open-source strategy will fare but some believe it could make it easier for users to adopt Sun's products.

Software with high costs and closed source code are more difficult to distribute, said James Governor, an analyst at RedMonk in Denver.

Products with low barriers of entry, such as open-source, "have fewer obstacles between them and developers."

Tony Baer, principal at onStrategies in New York, added that Sun had little to lose in making the move, given its limited success in selling middleware technologies. ▶

Microsoft Beefs Up Security Partner Rules

All must now be certified by outside groups

BY JAIKUMAR VIJAYAN

Microsoft Corp. last week said it's now requiring that security partners be certified by one of two third-party organizations. The move marks the first time Microsoft has required that partners be certified outside of its own Microsoft Certified Systems Engineer program.

Microsoft officials said the move is aimed at strengthening the capabilities of resellers to deliver security services to corporate customers.

Microsoft partners that specialize in security management services must now get certified under programs offered by the Information Systems Audit and Control Association (ISACA) in Rolling Meadows, Ill. Those specializing in infrastructure services must be certified by the International Information Systems Security Certification Consortium Inc. — also known as (ISC)² — in Vienna, Va.

Microsoft said it's working to provide partners with discounts for some of the certification classes.

Thomas Dawkins, group product manager in charge of Microsoft's security partner strategy, said Microsoft turned to third-party certification programs for the first time to better align the capabilities of its security services resellers with customer needs.



Additional Skills

The certification programs offered by ISACA and (ISC)² will give Microsoft partners security skills that go beyond Microsoft products — a key requirement for security tools, Dawkins said.

For instance, technology-centric certification programs such as (ISC)²'s Certified Information Systems Security Professional and its Systems Security Certified Professional course are designed to ensure that Microsoft resellers can handle infrastructure security issues, he said.

The new program can help users "feel more comfortable knowing that Microsoft is requiring its partners to have a wider perspective on security, [not] just a Microsoft vision," said John Pironti, principal security consultant at Unisys Corp., a Microsoft partner in Blue Bell Pa.

Pironti said Microsoft had to align with internationally recognized programs to become a credible security vendor. ▶

Sun Executive Explains Move to Open-Source



FOR YEARS, Sun Microsystems Inc. has tried to improve its software business. Just last week, Sun began offering all of its core software products as open-source technologies, a year after doing the same with Solaris. In an interview with *Computerworld* last week, John Loiacono, executive vice president of Sun's software group, talked about the company's software efforts.

Is Sun's recent open-source move aimed at helping independent software vendor and corporate development teams show IT managers the value of adopting your technology? Yes, they are definitely a primary target, but even on the deployment side, you've got architects and systems administrators who are effectively a different kind of developer and are also looking for easy, unencumbered access to software. It isn't solely developers.

What is the value of making the Java Enterprise System identity management suite open-source? The value of open-source to me has very little to do with making the bits available – it's the community aspect. That community can take that base technology and develop on top of it. Now we have a community of 10,000 people who are active [OpenSolaris] members, of which we've had hundreds of contributions, and we've already had probably 15 to 20 [new development features] integrated in, tested and certified, and now running as part of the OpenSolaris foundation.

What type of features do you expect to be added to JES by the open-source community? If someone has some authentication features, that will plug into an existing foundation. If someone has better cryptography, the ability to augment single sign-on capability – these are things that can come from Sun and can come from outside.

How will the new bundled Solaris Enterprise System, which includes JES, management and development tools, Solaris and Sun Ray, be offered to corporate users? You can package it up with an enterprise license agreement, and you can license the whole truckload. Most likely, people will evaluate on a broad scale and implement specific products.

How will the bundled product be priced? I will have it shortly. The JES is $140 per employee per year, and that's without the SeeBeyond integration. It will be something north of $140 [per user] when we include the SeeBeyond [integration technology]. SeeBeyond has about as much code as JES in its entirety. Then I will have to put some value on a subscription pricing for Solaris, N1 and the tools.

– PATRICK THIBODEAU

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Analysts aren't predicting how Sun's open-source strategy will fare but some believe it could make it easier for users to adopt Sun's products.

Software with high costs and closed source code are more difficult to distribute, said James Governor, an analyst at RedMonk in Denver. Products with low barriers of entry, such as open-source, "have fewer obstacles between them and developers."

Tony Baer, principal at onStrategies in New York, added that Sun had little to lose in making the move, given its limited success in selling middleware technologies. ▸

Microsoft Beefs Up Security Partner Rules

All must now be certified by outside groups

BY JAIKUMAR VIJAYAN

Microsoft Corp. last week said it's now requiring that security partners be certified by one of two third-party organizations. The move marks the first time Microsoft has required that partners be certified outside of its own Microsoft Certified Systems Engineer program.

Microsoft officials said the move is aimed at strengthening the capabilities of resellers to deliver security services to corporate customers.

Microsoft partners that specialize in security management services must now get certified under programs offered by the Information Systems Audit and Control Association (ISACA) in Rolling Meadows, Ill. Those specializing in infrastructure services must be certified by the International Information Systems Security Certification Consortium Inc. — also known as (ISC)² — in Vienna, Va.

Microsoft said it's working to provide partners with discounts for some of the certification classes.

Thomas Dawkins, group product manager in charge of Microsoft's security partner strategy, said Microsoft turned to third-party certification programs for the first time to better align the capabilities of its security services resellers with customer needs.



Additional Skills

The certification programs offered by ISACA and (ISC)² will give Microsoft partners security skills that go beyond Microsoft products — a key requirement for security tools, Dawkins said.

For instance, technology-centric certification programs such as (ISC)²'s Certified Information Systems Security Professional and its Systems Security Certified Professional course are designed to ensure that Microsoft resellers can handle infrastructure security issues, he said.

The new program can help users "feel more comfortable knowing that Microsoft is requiring its partners to have a wider perspective on security, [not] just a Microsoft vision," said John Pironti, principal security consultant at Unisys Corp., a Microsoft partner in Blue Bell, Pa.

Pironti said Microsoft had to align with internationally recognized programs to become a credible security vendor. ▸

Sun Executive Explains Move to Open-Source



FOR YEARS, Sun Microsystems Inc. has tried to improve its software business. Just last week, Sun began offering all of its core software products as open-source technologies, a year after doing the same with Solaris. In an interview with *Computerworld* last week, **John Loiacono**, executive vice president of Sun's software group, talked about the company's software efforts.

Is Sun's recent open-source move aimed at helping independent software vendor and corporate development teams show IT managers the value of adopting your technology? Yes, they are definitely a primary target, but even on the deployment side, you've got architects and systems administrators who are effectively a different kind of developer and are also looking for easy, unencumbered access to software. It isn't solely developers.

What is the value of making the Java Enterprise System identity management suite open-source? The value of open-source to me has very little to do with making the bits available – it's the community aspect. That community can take that base technology and develop on top of it. Now we have a community of 10,000 people who are active [OpenSolaris] members, of which we've had hundreds of contributions, and we've already had probably 15 to 20 [new development features] integrated in, tested and certified, and now running as part of the OpenSolaris foundation.

What type of features do you expect to be added to JES by the open-source community? If someone has some authentication features, that will plug into an existing foundation. If someone has better cryptography, the ability to augment single sign on capability – these are things that can come from Sun and can come from outside.

How will the new bundled Solaris Enterprise System, which includes JES, management and development tools, Solaris and Sun Ray, be offered to corporate users? You can package it up with an enterprise license agreement, and you can license the whole truckload. Most likely, people will evaluate on a broad scale and implement specific products.

How will the bundled product be priced? I will have it shortly. The JES is $140 per employee per year, and that's without the SeeBeyond integration. It will be something north of $140 [per user] when we include the SeeBeyond [integration technology]. SeeBeyond has about as much code as JES in its entirety. Then I will have to put some value on a subscription pricing for Solaris, N1 and the tools.

– PATRICK THIBODEAU

CANADIAN POSTMASTER
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FRANK HAYES • FRANKLY SPEAKING

Big Easy Wi-Fi

WHY, OH WHY is New Orleans launching a free citywide wireless network? At a time when the hurricane-ravaged city is still largely unlivable, with tap water still undrinkable in some areas, with the local power company saying electricity and natural gas won't flow in some neighborhoods until February, with many homes and businesses still waiting for phone and cable-TV service to work again — with all that still to handle, why did New Orleans last week start a city-owned, open-to-the-public Wi-Fi system that's nominally aimed at attracting tourists, conventions and new businesses?

Because it could. And because that's what technology is for.

There's nothing special about the technical details of the project. Like other muoicipal wireless systems, the one in New Orleans uses a mesh network of antennas mounted on existing utility poles. The signals piggyback on a fiber backbone designed to coonect security video cameras iostalled before hurricane Katrina hit. The Wi-Fi service started last week io the central business district and will expand into tourist haunts such as tbe French Quarter in the weeks to come.

In short, if you squioted hard and ignored the mess surrounding it, the New Orleans citywide wireless system wouldn't look much different from the one launched one day earlier in Tempe, Ariz. (except that Tempe's is a paid-subscription service and New Orleans's can't ruo at full Wi-Fi speeds, thanks to a state law hobbling government-owned wireless systems).

But not everyone is happy about the New Orleans launch. After all, New Orleans isn't Tempe. Tempe wasn't emptied three months ago by a hurricane. With so much work yet to do on core services, more thao a few people are asking wby New Orleaos is installing a frill like free Wi-Fi before there's a functioning city underneath it.

Short answer: Because it can. Literally. New Orleans can't restore water or gas or electricity or phone or cable service any faster than it already is. Entergy and BellSouth and Cox Cable and the city's water department are patching tbings up as quickly as possible, but that requires repairing the existing physical iofrastructure. Water and gas pipes have to be purged of flood water. Power, phone and cable wires have to be repaired or restrung and tested. That's a slow, painstaking process.



FRANK HAYES, Computerworld's senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

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More than that, Wi-Fi is something New Orleans can use right now. No, oot for the tourists (who aren't there anyway). But for police, fire and emergency personnel. And building inspectors. And contractors filing permits. And the same power, phone and cable workers who are busy restoring the city's more traditional infrastructure.

This isn't a gimmick to lure tourists, conventioneers and businesses back to the Big Easy, though that's the way the politicians trumpeted it. One more time: There aren't any tourists or conventioneers. There aren't enough customers to support new businesses. If tourists, conventioneers and new business were its purpose, throwing up a quick Wi-Fi system in New Orleans is something that would make sense to do later, not sooner.

No, that "rebuilding New Orleans with a wireless future" jazz just makes a better sound bite than saying, "We installed Wi-Fi now because we can do it quickly and the improved communication will speed up the process of putting the city back together."

That's what technology is for. It's wbat technology is good at, when we use it well: solving problems faster, and in ways that wouldn't be possible otherwise. It's not a frill. Sometimes it's the best solution we have.

Why Wi-Fi in New Orleans? It's a fair question. Aod in New Orleans, this time at least, techoology is a pretty good answer. ▸

SHARK TANK

Getting the Message

IT manager is reluctant to buy the help desk new phones that support Caller ID. "He explained he would have trouble justifying the expense to the finance manager, who continually berated the help desk as unresponsive," reports pilot fish on the scene. "I countered by forwarding several voice-mail messages left for the help desk. He recognized the voice on one message as the finance manager. The message: 'This @!$%! isn't working. Call me right away!' The help desk got the new phones."

Feeling Blue

On-the-road sales VP calls help desk: His laptop gets a "fatal exception" error every time he boots it up. "After he enters his password and the desktop is about to build, bam! – he gets the fatal exception," pilot fish says. "We try to talk him through it, but on every reboot it's back." Once VP is back in the office, fish fires up the laptop – and sees the problem. "It's only wallpaper," says fish. "He's infected with spyware that changed his desktop background to a picture of the blue screen of death – with an ad for spyware removal."

Forklift Syndrome

Warehouse inventory manager calls sysadmin pilot fish, saying, "You need to come look at this machine down here. It's got a bad cable." Fish walks down only to discover that the PC won't even boot up. And no wonder: The power, mouse, keyboard and network cables have all been completely severed. What happened? Manager: "Well, a forklift hit the table and kept on going about 20 feet. I figured we should at least try to restart the computer, but it didn't work."

Both Sides Now

Frantic new sales guy grabs IT pilot fish as he walks by and asks why the printers don't work. "He showed me the problem printout, which had been unceremoniously discarded in the trash," fish says. "I asked which pages were missing. 'All the even pages,' he said. I took the pages out of the salesman's hands, flipped them over, handed them back – and asked, 'Now what pages are missing?' "

Walk-Around

User: "My keyboard isn't working anymore." Support pilot fish: Are you sure it's plugged into the computer? User: "No, I can't get behind the computer." Fish: Pick up your keyboard and walk 10 paces back. User: "OK." Pause. Fish: Did the keyboard come with you? User: "Yes." Fish: That means the keyboard isn't plugged in. Is there another keyboard? User: "Yes, there's another one here. Ah, that one does work."

WORK WITH SHARKY ON THIS. Send me your true story of IT life at sharky@computerworld.com. You'll snag a snazzy Shark shirt if I use it. And check out the daily feed, browse the Sharkives and sign up for Shark Tank home delivery at computerworld.com/sharky.

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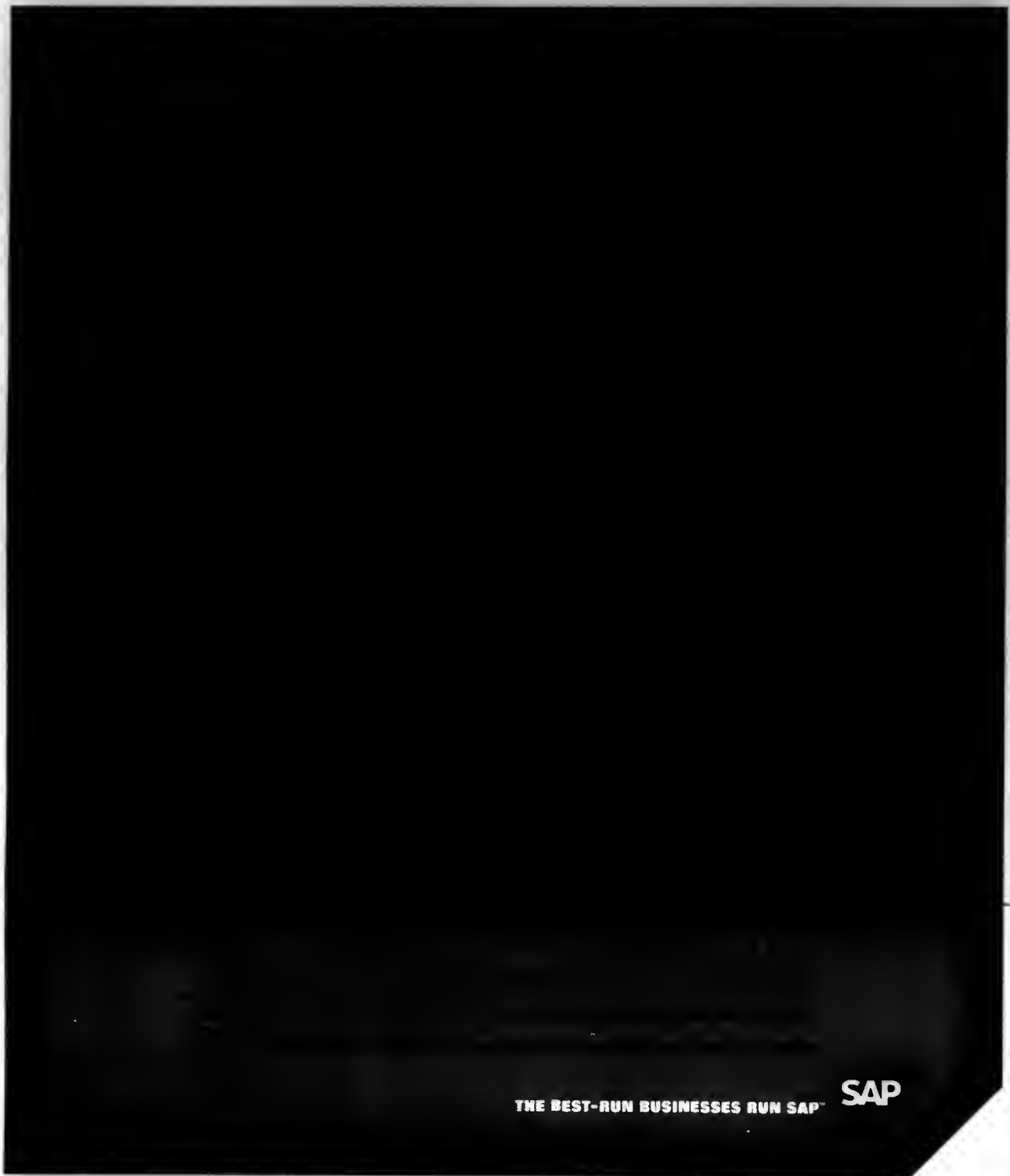
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